



# **ANNUAL**

**DIRECTOR-GENERAL OF HEALTH**

# **REPORT**

**1962-63**



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## **DIRECTOR-GENERAL OF HEALTH**

# **REPORT**

**1962-1963**  
**(SEPTEMBER 1963)**

# COMMONWEALTH DEPARTMENT OF HEALTH

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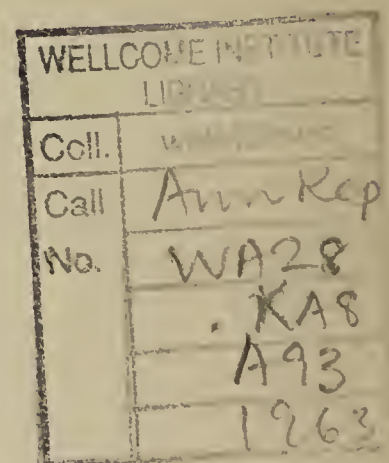
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National Biological Standards Laboratory

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Commonwealth Acoustic Laboratories

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Commonwealth X-ray and Radium Laboratory

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### **Medical Officer-in-charge:**

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The Hague

Medical Director: Dr. C. W. Phillips, M.B., B.S., D.T.M.&H.

Athens

Medical Director: Dr. K. H. S. Cooke, M.B., B.S.

Cologne

Medical Director: Dr. C. W. Ramsay, M.B., B.S., D.P.H.

Cairo

Medical Director: Dr. S. G. Preston, M.B., B.S.

## **NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL**

### **Secretary:**

Dr. R. H. C. Wells, M.D., B.S., B.Sc., M.R.C.P., D.T.M.&H.



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# INTRODUCTION

THE YEAR covered by this report has been one of steady development in all the varied fields of activities of the Department. Total expenditure on all activities in 1962-63 amounted to £96,200,000 compared with £88,900,000 in 1961-62.

National health benefits, which have now become firmly established as an integral part of the life of the community, again provided substantial assistance towards meeting the costs of medical and hospital treatment and of drugs prescribed by doctors. Expenditure on national health benefits amounted to £78,400,000 in 1962-63 compared with £72,700,000 in 1961-62.

Commonwealth hospital and medical benefits paid during the year amounted to £23,700,000 and £11,700,000 respectively, while payments to doctors for services rendered to pensioner patients under the Pensioner Medical Service amounted to £4,600,000. Payments in 1961-62 for these items were £22,200,000, £10,900,000 and £4,400,000. Expenditure on pharmaceutical benefits increased by £3,300,000 over the previous year to reach £38,500,000 for 1962-63, although the average cost per prescription fell from 20s. 1d. to 19s. 4d.

On 1st January, 1963, revised hospital benefit arrangements were introduced to implement simpler methods of payment of Commonwealth hospital benefits and to provide for pensioners and nursing home patients without the need for them to insure. Full details of the new arrangements are given in the body of the report.

One important change in the pharmaceutical benefits scheme was the extension of the availability of the tranquillizing drugs chlorpromazine hydrochloride and trifluoperazine to patients after they have been treated for psychiatric conditions in approved hospitals, provided they hold a certificate from the hospital in which they received treatment. Formerly these drugs were only available to these patients while actually being treated at the hospital.

Because of the recent revelations of the harmful side-effects of some hitherto widely used drugs and the rapidity with which many new and potent remedies are being introduced into therapy, a committee known as the Australian Drug Evaluation Committee was established in June, 1963. This Committee, whose members are eminent in the fields of clinical medicine and pharmacology, will report on the safety of drugs generally, evaluate specific drugs referred to it for opinion by the Director-General and act as an independent arbiter in cases where an importer or manufacturer of drugs desires a review of a prohibition imposed by the Department.

The past year has been notable in regard to the progress and re-appraisal of the national campaign against tuberculosis. A conference of the Commonwealth and State Ministers for Health and their senior advisers in April, 1963, accepted the position that, although great progress had been made in the fight against tuberculosis, the incidence of the disease showed that there was no place for complacency. The conference accepted two important recommendations. These were firstly that each State will direct that attendance at community chest X-ray surveys shall be compulsory and secondly that the States will provide adequate chest clinics for the control of tuberculosis with sufficient full-time medical officers working under the State Directors of Tuberculosis.

The incidence of poliomyelitis in the year under review was low in all States, only 35 cases being confirmed by the Poliomyelitis Surveillance Committee compared with 572 in the previous year. Although the number of cases was small, this does not mean that the danger of future outbreaks has disappeared. For use in any future emergency 1,000,000 doses of each of the three poliovirus types of Sabin vaccine were imported during the year and are held at the Commonwealth Serum Laboratories. The recommendation of the National Health and Medical Research Council that a fourth dose of Salk vaccine should be given a minimum of one year after the third dose was implemented and an average of 31,000 doses of vaccine were issued to the States each week since January, 1963.

In spite of the increase in tourism and international trade there is no evidence that the quarantine barriers maintained by the Human, Animal and Plant Quarantine Divisions were broken in any material respect in the past year. The campaign against the Sirex Wood Wasp was continued by the National Sirex Fund Committee.

The Department's laboratories carried out a wide range of research and collaborated with the medical and allied professions and industry in many fields. The work of these laboratories is outlined in detail in this report.

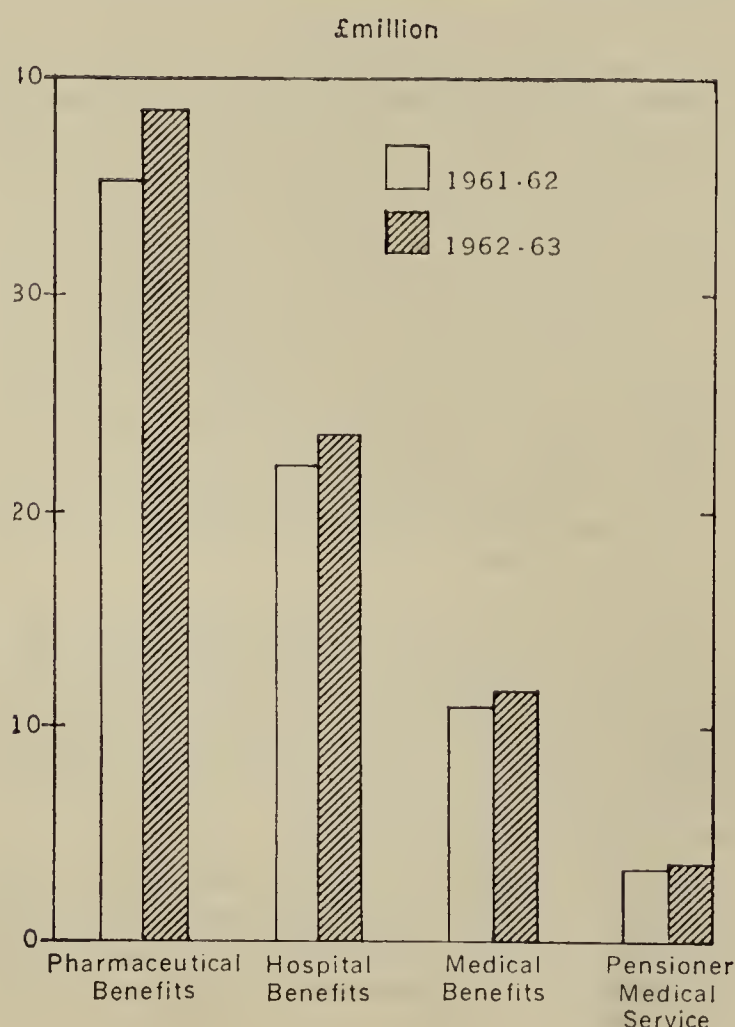
# NATIONAL HEALTH BENEFITS

THE NATIONAL HEALTH SCHEME had its beginnings in 1946, when the Commonwealth entered into agreements with the States providing for payment by the Commonwealth of a hospital benefit of 6s. per day in respect of each daily occupied bed in a public hospital.

The National Health Act was introduced in 1953 to consolidate into a single Act all legislation which provided the necessary authority for the separate services of the National Health Scheme. The *National Health Act* 1953-1962 provides for the Medical Benefits Scheme, the Hospital Benefits Scheme, the Pensioner Medical Service and the Pharmaceutical Benefits Scheme.

Commonwealth expenditure on these activities has continued to expand and in the year ended 30th June, 1963, amounted to £78,400,000 compared with £72,700,000 in the previous year. The major portion of the increase was attributable to Pharmaceutical Benefits which increased by £3,300,000.

COMMONWEALTH EXPENDITURE UNDER THE NATIONAL HEALTH SCHEME 1961-62 AND 1962-63



## HOSPITAL BENEFITS

Commonwealth benefits paid towards meeting the cost of hospital and nursing home treatment amounted to £23,700,000 in 1962-63 an increase of 6.8 per cent. over the previous year. Amounts paid by registered organizations by way of hospital fund benefits also increased to £18,400,000 for 1962-63.

Part V. of the National Health Act, which provides for the payment of Commonwealth hospital benefits, was amended by Act 82 of 1962 which received the Royal Assent on 12th December, 1962, and came into effect on 1st January, 1963. The effects of the amendments are explained below.

### PRIOR TO 1ST JANUARY, 1963

Prior to the amendment of Part V. of the *National Health Act* 1953-1961 by Act 82 of 1962, Commonwealth Hospital Benefits were of two types—ordinary hospital benefit and additional hospital benefit.

#### Ordinary Hospital Benefit

Commonwealth Ordinary hospital benefit was provided for all public and approved private hospitals in Australia by way of deduction from patients' hospital accounts at the rate of 8s. a day. For uninsured pensioners enrolled in the Pensioner Medical Service and their dependants while they were patients in public hospitals and for patients in certain South Australian hospitals 12s. a day was provided. For patients (including pensioners) in public hospital the Commonwealth Ordinary hospital benefit was paid by the Commonwealth Department of Health to the State health authorities. For patients in approved private hospitals the benefit was paid to the proprietors of the hospitals.

The daily rate of payment of benefits for patients in public hospitals was governed by agreements between the Commonwealth and each of the State Governments. These agreements expired on 20th August, 1962. Regulations under the National Health Act were introduced early in August to ensure the continuation of the benefits after the expiry of the Agreements and until the new arrangements were introduced on 1st January, 1963.



Expenditure on Commonwealth Ordinary hospital benefits in 1962-63 amounted to £5,476,417.

### Additional Hospital Benefit

Commonwealth Additional hospital benefits were paid through registered organizations to their financial members at the rate of 4s. a day to contributors who were insured for a fund benefit of at least 6s. a day but less than 16s. a day and at the rate of 12s. a day to contributors who were insured for a fund benefit of at least 16s. a day. The patient normally received the additional benefit with the amount of fund benefit payable by the organization. Reimbursement of the Commonwealth Additional benefit was subsequently made to the organization by the Commonwealth.

Commonwealth Additional hospital benefits paid in 1962-63 amounted to £6,543,983.

### FUND BENEFIT

As charges for hospitalization have increased new hospital benefit tables have been introduced by registered hospital benefit organizations to afford the public the opportunity to obtain adequate benefit cover. Most organizations now operate tables providing a combined Commonwealth and Fund benefit of 80s. a day.

In all States benefit tables are available to provide adequate cover for persons who wish to insure against the cost of public, intermediate or private ward accommodation.

Payments by registered organizations by way of hospital fund benefits amounted to £18,363,606 in 1962-63.

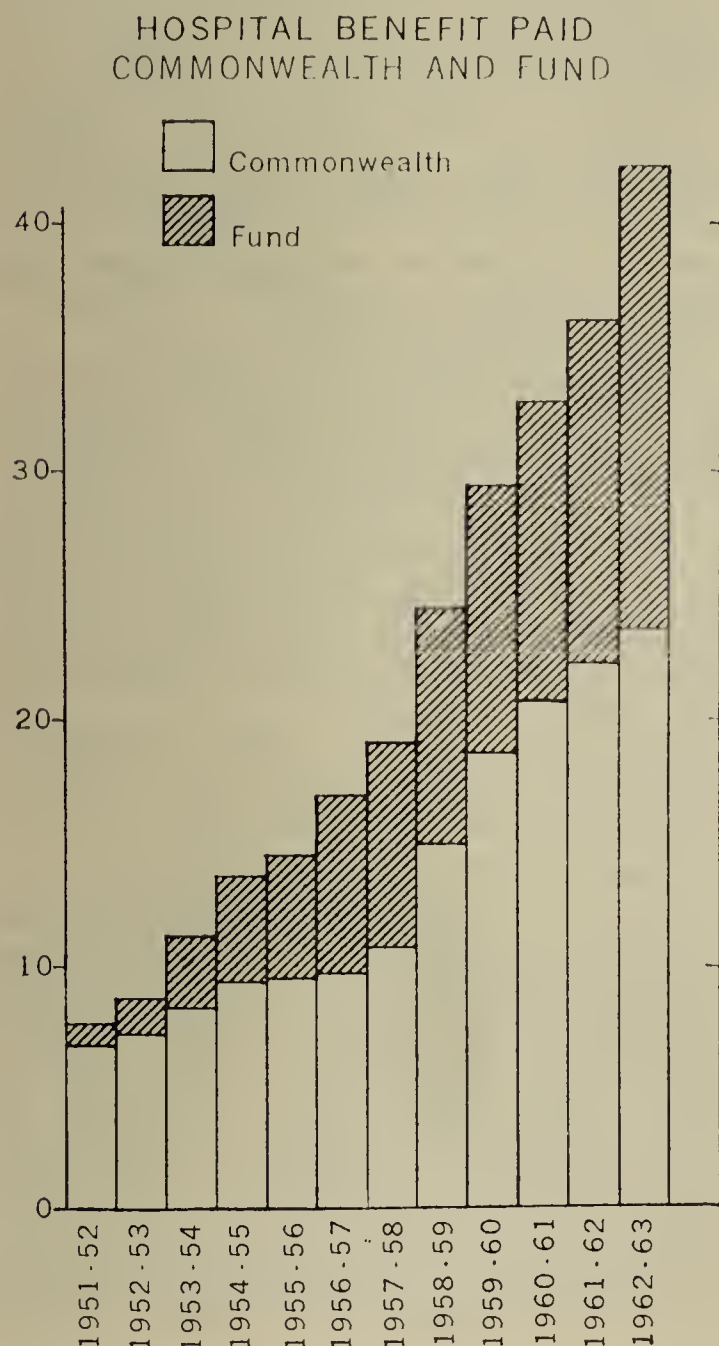
### SPECIAL ACCOUNTS

The Special Account system was introduced on 1st January, 1959, to provide an assured rate of hospital fund benefit to contributors who would otherwise have been excluded from fund benefits on account of organizations' rules relating to pre-existing ailments, chronic illnesses and maximum fund benefit. The hospital fund benefit generally payable in such cases is 16s. a day and is paid either from the Special Accounts guaranteed by the Commonwealth or from the ordinary accounts of the organizations.

The National Health Act requires that where a hospital benefits organization has established a Special Account the contributions of all contributors over 65 years of age must be credited to that account and one condition of payment of Special Account fund benefit was that the treatment must be given in hospitals recognized for the purpose of paying this benefit. The Act provided that benevolent homes, convalescent homes, homes for the aged, rest homes and similar institutions could not be recognized for this purpose. However, provision existed for the payment of Special Account fund benefit in certain circumstances to particular individual patients in hospitals which were not recognized where the patient was suffering from an illness requiring treatment of the kind provided in recognized hospitals and had in fact received such treatment.

A further condition applicable to the payment of benefits from Special Accounts is that combined Commonwealth and Fund benefit must not exceed the amount of the hospital charge and certain other hospital charges for extras such as for the use of an operating theatre, pathological services, drugs and dressings.

An organization which has established a Special Account is required to credit to that Account all contributions receivable from Special Account contributors. If, at the end of the financial year, the payments from the Special Account for benefits and reasonable management expenses exceed the contributions credited to the Account, the amount of deficit





is reimbursed by the Commonwealth. At intervals during the year advances were made to a number of organizations which have established Special Accounts for the purpose of enabling them to meet claims for payment of fund benefit by Special Account contributors. These advances are offset against the amount of deficit when it is reimbursed.

During 1962-63 settlement of deficits incurred in 1961-62 and payment of advances under the Special Account Plan amounted to £2,122,836 compared with £2,665,566 in the previous year. Under new arrangements (explained in full below), which enable eligible pensioners to receive free treatment in public wards of public hospitals, there has been a substantial reduction in the amount of fund benefit payment from the Special Account and a corresponding reduction in deficits incurred.

#### **FROM 1st JANUARY, 1963**

One aspect of the Hospital Benefits Scheme that had been a cause of some misunderstanding and difficulty had been the payment of Commonwealth benefit for insured patients in two separate stages, Ordinary hospital benefit of 8s. a day being deducted from the patient's hospital account and the 4s. or 12s. a day Additional benefit being paid to the patient by his insurance organization with his fund benefit.

A tendency had developed for pensioners to be required to pay hospital insurance contributions to meet charges for hospital treatment. As it has been the policy of the Commonwealth Government to provide free medical and pharmaceutical benefits for eligible pensioners under the Pensioner Medical Service it was considered desirable that arrangements should be made for the free treatment of these pensioners in public wards of public hospitals.

It had been found that the existing hospital benefit arrangements had not been operating satisfactorily for patients in convalescent and rest homes and infirmary sections of State benevolent homes and homes for the aged. Because many patients in these homes were pensioners and because they often remained in the homes for long periods the Commonwealth Government decided that they should not be obliged to join an insurance fund to qualify for Commonwealth benefits.

To simplify the Scheme and at the same time provide for pensioners and patients in convalescent and rest homes, new arrangements were authorized by the amendments to the National Health Act and Regulations whereby qualified patients in approved hospitals and nursing homes are eligible for only one Commonwealth benefit in any one day, the amount of Commonwealth benefit payable being—

In approved hospitals—

- (a) for insured patients—20s. a day (or 8s. a day during a waiting period or a period of unfinancial membership)

- (b) in respect of pensioners enrolled in the Pensioner Medical Service and their dependants in public wards of public hospitals—36s. a day

- (c) for uninsured patients not included in (b)—8s. a day.

In approved nursing homes—  
for all patients—20s. a day.

#### **Approval of Hospitals and Nursing Homes**

Generally, approved hospitals are those hospitals which were recognized for Special Account purposes. Approved nursing homes are those institutions which were not recognized and consist in the main of convalescent and rest homes and infirmary sections of State benevolent homes and homes for the aged.

#### **Insured Patients in Approved Hospitals**

Insured qualified patients in approved hospitals receive hospital benefit of 20s. a day, except during a waiting period or a period of unfinancial membership. The benefit is paid through the contributors' registered benefit organizations. Generally the Commonwealth hospital benefits are paid direct to the contributor together with the fund benefit to which he is entitled. Most organizations, however, have arrangements whereby the contributor may submit the hospital account together with the certificate of hospitalization to the organization and payment of benefits is made to the hospital and offset against the amount owing.

A condition of eligibility for receipt of the Commonwealth hospital benefit of 20s. a day is that a person who joins a registered organization after 31st December, 1962, must contribute for a fund benefit of at least 16s. a day. Persons who, at 31st December, 1962, were contributing for a fund benefit of at least 6s. a day but less than 16s. a day may continue to contribute for the same fund benefit and still be eligible to receive the Commonwealth hospital benefit of 20s. a day.

Expenditure to 30th June, 1963, on Commonwealth hospital benefits for insured patients under the new arrangements was £3,317,764.

#### **Uninsured Patients in Approved Hospitals**

As it was not intended that the new arrangements should deprive a person of any existing entitlement, a Commonwealth benefit of 8s. a day is deducted from the accounts of patients in approved hospitals. Previously this Commonwealth benefit in respect of patients in public hospitals was paid through the State Treasuries. To facilitate a simplification of existing procedures and ensure that payment of the benefits to the hospitals is made with a minimum of delay, the benefits are now paid direct to the hospitals. In the case of private hospitals the payment is made to the proprietors of the hospitals as in the past.



Commonwealth hospital benefits for uninsured patients to 30th June, 1963, amounted to £513,850.

### Pensioners in Public Wards of Public Hospitals

Experience had shown that the majority of insured pensioners were Special Account contributors who were subject to excluding rules which had limited fund benefits from the Special Account to 16s. a day. As the Commonwealth had accepted liability for these benefits through the Special Account plan, the total benefit paid of 36s. a day, comprising Ordinary hospital benefit of 8s. a day, Additional benefit of 12s. a day and fund benefit of 16s. a day, was in effect met by the Commonwealth.

The Commonwealth Government considered it would be much simpler and more reasonable to make these benefits available to pensioners without the need for them to insure. Arrangements were therefore made with the State authorities for public hospitals to treat eligible pensioners in public wards without charge and to be paid a Commonwealth benefit of 36s. a day.

As with the 8s. a day benefit for uninsured patients the 36s. a day benefit for pensioners is paid direct to the hospital.

Payments to public hospitals to 30th June, 1963, in respect of pensioners amounted to £2,365,634.

### Nursing Home Patients

A Commonwealth Nursing Home benefit of 20s. a day is paid for all qualified patients in approved nursing homes, whether the patient is insured or not. The benefit is deducted from the patient's account and paid by the Commonwealth to the nursing home.

Most patients in nursing homes remain for long periods and prior to 1st January, 1963, had to contribute to a registered organization to obtain Commonwealth benefit of 20s. a day, but generally they did not qualify, under organizations' rules, for fund benefit. The Commonwealth Government felt that it would be more reasonable to make available a benefit of 20s. a day without the need to insure. Accordingly provision was made in the amendments to the National Health Act for the payment of Commonwealth Nursing Home benefit for patients in approved nursing homes.

To cover the case of an uninsured nursing home patient who finds it necessary to transfer to an approved hospital to receive hospital treatment it was provided that, from 1st January, 1963, Commonwealth hospital benefits at the rate of 20s. a day should be paid to a contributor immediately on joining a hospital benefits organization if he had been a qualified nursing home patient in the period of two months prior to becoming a contributor.

Commonwealth Nursing Home benefits paid in the six months to 30th June, 1963, amounted to £3,322,566.

## 1962-63 Expenditure

Details of Commonwealth expenditure under the old and the new arrangements are set out below.

### *Arrangements applying prior to 1.1.63—*

	£	£
Ordinary Benefits—		
Public Hospitals..	3,606,955	
Private Hospitals	1,869,462	
Total Ordinary	..	5,476,417
Additional Benefits—		
Public and Private Hospitals	6,543,983	

### *Arrangements applying from 1.1.63—*

Insured Patients—		
Public and Private Hospitals..	3,317,764	
Uninsured Patients—		
Public Hospitals..	465,057	
Private Hospitals	48,793	
Total Uninsured	..	513,850
Pensioners in Public Wards	..	2,365,634
Nursing Home Benefits—		
Public ..	..	1,256,262
Private	..	2,066,304
Total Nursing Home	..	3,322,566
Special Account Expenditure	..	2,122,836
		<hr/>
TOTAL COMMONWEALTH		23,663,050

## MEDICAL BENEFITS

Commonwealth medical benefits are paid in respect of medical expenses incurred by persons who are contributors to registered medical benefits organizations or by the dependants of such contributors. The benefits are usually paid on a fee-for-service basis for the medical services set out in the First and Second Schedules to the National Health Act.

However, some registered organizations provide medical services for their members under contract arrangements with doctors. In these cases, the Commonwealth benefit is provided by way of cash reimbursement to the organization of a proportion (not exceeding one-half) of the payments made to the doctors for services covered by the contract.

Payments of Commonwealth medical benefits on a fee-for-service basis are made only to financial contributors to registered medical benefits organizations which, subject to their rules, also pay a fund benefit equal to or greater than the amount of Commonwealth benefit.

Generally, for a weekly contribution of between 1s. 3d. and 2s. for a single person and between 2s. 6d. and 4s. for a family, a contributor receives a combined Commonwealth and Fund benefit ranging



from 12s. to 16s. for a general practitioner consultation to £60 for some major operations. The combined benefit must not, however, exceed 90 per cent. of the fee charged by a medical practitioner.

#### REVIEW OF TEN YEARS OPERATION

The Medical Benefits Scheme had its inception when Regulations, providing for the payment of cash benefits in respect of professional services rendered by medical practitioners, were gazetted on 12th March, 1953, under the authority of the *National Health Service Act 1948-1949*. The Scheme commenced on 1st July, 1953, and as it is now ten years since its introduction this is an appropriate time to review the operation of the Scheme.

During the year ended 30th June, 1954, Commonwealth benefits of £1,408,354 were paid for 3,283,734 services to insured contributors and their dependants, while payments to contract organizations amounted to £25,813. Membership of registered medical benefits organizations at 30th June, 1954, was 1,358,337 and 39 per cent. of the population was covered by the Scheme.

During 1962-63 Commonwealth benefits of £11,448,891 were paid for 23,430,638 services to insured contributors and their dependants and payments to contract organizations amounted to £42,045. Membership of registered medical benefits organizations at 30th June, 1963, was 2,952,419 and 71 per cent. of the population was covered by the Scheme.

#### Schedules to the Act

In 1957 the Schedules to the National Health Act were completely redrafted and some minor variations made in the amounts of Commonwealth benefit particularly for pathological and radiological services. The maximum Commonwealth benefit payable for any single item at this time was £11 5s.

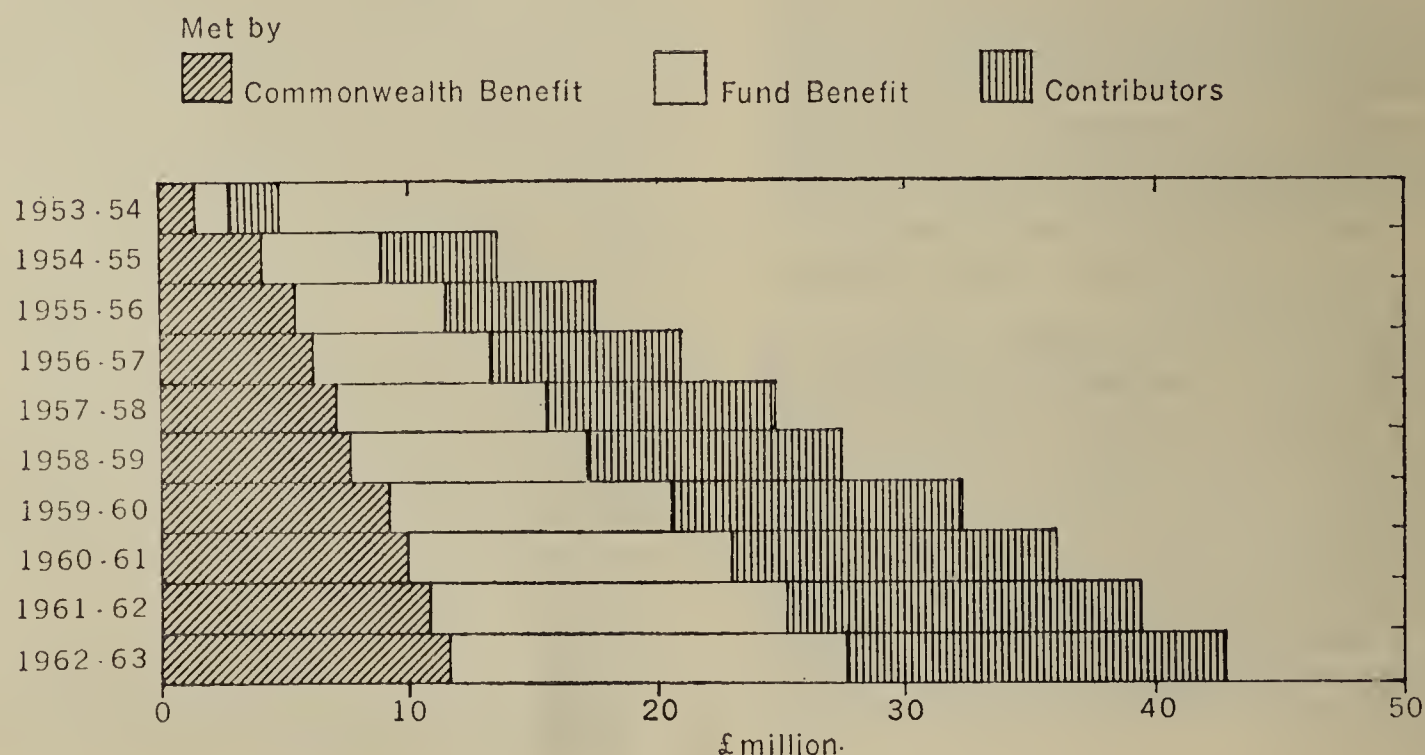
Revised Schedules were again incorporated in the Act to operate from 1st January, 1960. Commonwealth benefits for a number of services, some of them in the First Schedule, were increased, the maximum Commonwealth benefit for any single item rising to £22 10s. Special provision was made to ensure that contributors to old tables of Fund benefits linked to the superseded Schedules would retain their eligibility for Commonwealth benefits.

Subsequently the National Health Act was amended by Act 16 of 1961 to provide that the test of eligibility for Commonwealth benefit at any given time would be membership of a table of Fund benefits at least matching the benefits specified in the First Schedule in force at the time the person became a contributor to that table.

#### Special Accounts

In 1957-58 approximately 266,000 professional services rendered to contributors of registered organizations were excluded from fund benefit under the organizations' rules relating to pre-existing ailments and maximum benefits. As the non-payment

COST OF MEDICAL SERVICES RECEIVED BY  
CONTRIBUTORS TO REGISTERED ORGANIZATIONS





of fund benefit generally occurred in cases where it was most needed, consideration was given to the provision of Commonwealth assistance to enable payment of fund benefit in such cases.

To meet this problem Special Accounts were introduced from 1st January, 1959.

The basic principle of the Special Accounts is that the registered organizations provide minimum fund benefits known as "standard rate" benefits, to contributors in respect of claims which would otherwise be disallowed under organizations' rules relating to pre-existing ailments and maximum benefits. The "standard rate" benefit, in respect of medical claims, is generally a fund benefit for each medical service equivalent to the amount specified for that service in the First and Second Schedules to the National Health Act. If a special account contributor contributes to a table which provides fund benefits only for the items listed in the First Schedule to the Act, the payment of "standard rate" benefits from the Special Account is limited to those items.

Initially the Special Account legislation required that all contributors to medical benefits organizations aged 65 years and over should be transferred to the Special Account. However, it was found during the first year of operation of the Special Accounts that, so far as medical benefits were concerned, the contributors aged 65 years and over were, in general, not a "bad risk" and their transfer to the medical benefit Special Account was not necessary. Consequently, the requirement was waived for medical benefits as from 1st January, 1959.

#### **COMMONWEALTH HEALTH INSURANCE COUNCIL**

The Commonwealth Health Insurance Council is constituted under Section 136 of the National Health Act. Its functions are to advise the Minister on matters relating to the Hospital and Medical Benefits Schemes and to recommend means by which improvements in methods and standards may be effected. The Council consists of the Director-General of Health as Chairman, six members nominated by the State Associations of registered organizations, five members representative of registered organizations generally and one member nominated by the Federal Council of the Australian Medical Association.

The Council met in Canberra in February, 1963, and discussed various aspects of the Hospital and Medical Benefits Scheme and made a number of recommendations to the Minister covering matters mainly of a procedural nature.

#### **REGISTRATION COMMITTEE**

The Registration Committee, which is constituted under section 70 of the National Health Act, consists of the Commonwealth Actuary or his representative and two officers of the Department of Health.

The Committee met on seventeen occasions during 1962-63 and made recommendations on 138 amendments to rules submitted by registered organizations, including those relating to the introduction of tables of higher benefits to cover the increase in public hospital charges in New South Wales from 1st May, 1963.

#### **PENSIONER MEDICAL SERVICE**

The Pensioner Medical Service, which commenced on 21st February, 1951, and operates under Part IV. of the *National Health Act* 1953-1962, is a general practitioner medical service provided free of charge to eligible pensioners and their dependants.

Under this service, participating doctors provide medical attention of a general practitioner nature, such as is ordinarily rendered by a general practitioner in his surgery or at the patient's home, to enrolled pensioners and their dependants. This includes treatment of a patient who has undergone a surgical operation from the time that he returns home from a hospital, but the service does not extend to specialist treatment, general anaesthetics or fractures. The pensioner (or dependant) has freedom of choice as to which participating doctor he will consult.

Doctors participating in the service are remunerated by the Commonwealth on a concessional fee-for-service basis. During the year fees payable to doctors were increased by 1s. to 12s. for surgery consultations and 14s. for domiciliary visits, the higher fees to apply in respect of services rendered on and from 1st December, 1962.

In addition to the general practitioner service given to enrolled pensioners, a full range of medicines is available free of cost from a chemist upon presentation of a prescription written by a doctor.

The number of doctors participating in the Pensioner Medical Service continued to increase in 1962-63. At 30th June, 1963, 6,025 doctors were enrolled, an increase of 13 on the number participating at 30th June, 1962. The average payment to each doctor increased from £738 to £760.

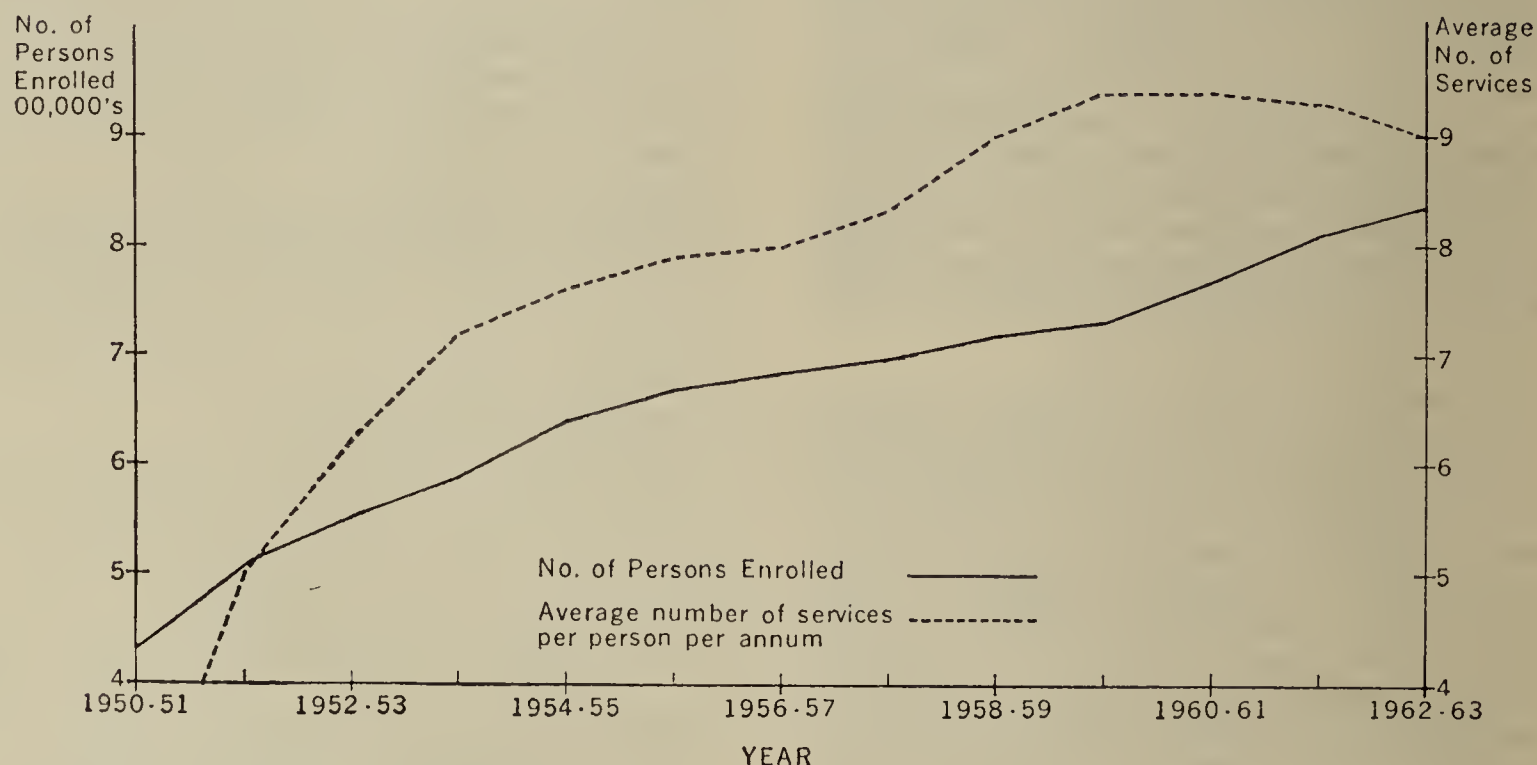
Persons eligible for the Pensioner Medical Service are persons receiving an age, invalid or widow's pension under the Commonwealth Social Services Act or a service pension under the Repatriation Act, subject to an income means test, and persons receiving a tuberculosis allowance under the Tuberculosis Act. Dependent wives and children (under sixteen years of age) of persons who are eligible, are also entitled to the benefits of the Pensioner Medical Service. Details of the income means test have been given in previous reports.

The number of pensioners and dependants enrolled in the Pensioner Medical Service has shown a steady

increase since the inception of the service. At 30th June, 1951, the total number of persons enrolled was 432,196. This figure had increased to 831,000 at 30th June, 1963, approximately 7.7 per cent. of the population.

The average number of medical services received by persons enrolled in the service which rose from 5.0 services per annum for the year ended 30th June, 1952 (the first full year of operation of the service), to a peak of 9.4 services for the years 1959-60 and 1960-61, has now become stabilized, the figure for the current year being 9.0 services per annum.

The graph below depicts the increase in the number of pensioners and dependants enrolled and the average number of services per person per annum since 30th June, 1951.



Statistics relating to the Pensioner Medical Service are set out in Tables 7, 8 and 9 on pages 69 and 70.

#### COMMITTEES OF INQUIRY

Medical Services Committees of Inquiry have been established in each State under the provisions of section 110 of the National Health Act. The personnel of each committee consists of the Commonwealth Director of Health for the particular State and four medical practitioners appointed by the Minister for Health from a panel of medical practitioners nominated by the council of the State branch of the Australian Medical Association. The functions of

the committees are to inquire into and report to the Minister for Health or the Director-General of Health on any matter referred to them arising out of the services or conduct of medical practitioners in respect of the Pensioner Medical Service. Broadly, the committees' investigations are directed to breaches of the spirit and principles of the Pensioner Medical Service rather than to breaches of the statutory provisions of the National Health Act. The committees' functions also include matters in relation to the prescribing of pharmaceutical benefits by medical practitioners.

The committees have no power to impose penalties or to take disciplinary action themselves. However, on completion of an inquiry, the Committee recommends to the Minister what it considers to be the appropriate action to be taken. The Minister on

receipt of the Committee's report may disallow, in whole or in part, payment of fees to the doctor in respect of medical services specified in the report, reprimand the medical practitioner or terminate immediately the agreement entered into with the medical practitioner. Notice of the action taken may be published in the Commonwealth Gazette.

In 1962-63 51 inquiries into the provision by medical practitioners of medical services to pensioners by committees of inquiry were finalized. These inquiries resulted in the reduction of the doctors' claims by a total of £29,000 in 39 cases and of these ten were reprimanded by the Minister.



## PHARMACEUTICAL BENEFITS

Under the Pharmaceutical Benefits Scheme all prescriptions written in accordance with the Regulations are available to the general public for the payment of a 5s. fee. Pensioners who are enrolled in the Pensioner Medical Service, together with their dependants, receive these prescriptions free of charge. Pharmaceutical benefits are supplied by approved pharmaceutical chemists on prescriptions of medical practitioners, but in areas where there is no approved chemist provision exists whereby a medical practitioner may be approved to supply pharmaceutical benefits.

The patient has complete freedom of choice both of doctor and chemist.

The drugs and medicinal preparations available as pharmaceutical benefits are determined by the Minister on the advice of the Pharmaceutical Benefits Advisory Committee, which, in addition to recommending drugs and medicinal preparations, also recommends the maximum quantity that can be prescribed and any restrictions to apply to these items. The National Health Act and Regulations make provision for increased maximum quantities and repeats to be made available where continued treatment is deemed necessary by the doctor concerned.

Provision is made for the approval of hospitals to supply pharmaceutical benefits, most public hospitals being approved to supply benefits and a few of the larger private hospitals having diagnostic facilities are similarly approved. Benefits are available to both in-patients and out-patients.

Certain new and more potent drugs in the list of pharmaceutical benefits are restricted to supply through approved hospitals only.

In isolated areas where normal pharmaceutical services are not available, the Minister may make special arrangements for the supply of pharmaceutical benefits. These arrangements have been made with the Royal Flying Doctor Service and similar organizations. Arrangements have also been made with Bush Nursing Centres throughout Australia.

Approved chemists are required to supply pharmaceutical benefits during normal trading hours and at any time outside normal trading hours if the prescription for a pharmaceutical benefit is marked "Urgent" and initialled by a doctor. When this service is provided, the chemist may charge a late fee.

Provision is made in the National Health Act for the Minister to determine, after consultation with the Federated Pharmaceutical Service Guild of Australia, the rates and conditions of payments to approved chemists for benefits supplied.

The drugs available as pharmaceutical benefits comprise the majority of drugs which are the sub-

ject of monographs in the British Pharmacopoeia and such other drugs and medicinal preparations as are prescribed. Within the list of benefits a doctor may prescribe, subject to any restriction on the use of the drug, the drug of his choice in the treatment of his patient.

### Prescribers' Journal

The British National Health Service, concerned by the difficulty encountered by busy doctors in obtaining early and reliable information about new pharmaceutical products, decided to produce in 1961 a journal that would provide early and impartial information on new drugs and medicinal preparations. This journal is known as the *Prescribers' Journal*.

A similar problem exists for Australian doctors and it was considered that the *Journal* would prove of valuable assistance to doctors throughout this country. Permission was therefore obtained from the British Authorities to reproduce and distribute the *Journal* to doctors in Australia. The first issue of the Australian edition of the *Journal* was made in August, 1962, and it has been issued regularly since. All numbers in the British editions have been included in the Australian publication which is now available shortly after the *Journal* is available to doctors in Britain.

The *Prescribers' Journal* has been well received by the medical profession in Australia and many doctors have expressed their appreciation of its publication.

### Cost of the Scheme

Expenditure by the Commonwealth on Pharmaceutical Benefits for the year increased by £3,265,196 over that for the year 1961-62 to a total of £38,455,079 (including £9,915,375 for pensioners and £4,993,191 reimbursed to approved hospitals, Bush Nursing Centres, &c.). Total payments by patients, at 5s. per prescription, amounted to £7,371,224.

The number of prescriptions represented by the above payments (excluding the £4,993,191 reimbursement to hospitals, Bush Nursing Centres, &c.) totalled 42,192,040 made up of 12,674,230 for pensioners and 29,517,810 for the general public.

The average cost per prescription in 1962-63 was 19s. 4d. compared to 20s. 1d. in 1961-62.

Expenditure for benefit prescriptions (excluding hospitals, Bush Nursing Centres, &c.) increased by £2,048,146. The increase was due to a higher volume of prescriptions involving an additional amount of £3,758,316. This amount was partly offset by a reduction in the average cost per prescription which meant a saving of £1,710,170.

The increased volume of prescriptions was due to a combination of the rise in population, more frequent prescribing and additions to the list of



benefits. The reduction in the average cost per prescription reflects reductions in prices made by manufacturers for drugs included in the list of benefits.

Itemized expenditure on some of the more frequently prescribed therapeutic groups is set out below. Figures are based on claims received during the year and include the patient contribution of 5s. per prescription but exclude reimbursements to approved hospitals, Bush Nursing Centres, &c.

Therapeutic Category	Expenditure for Period 1.7.62 to 30.6.63
	£'000
Broad Spectrum Antibiotics .. .. .	8,208
Penicillins .. .. .	3,938
Analgesics .. .. .	3,335
Diuretics .. .. .	3,051
Hypnotics .. .. .	2,447
Blood Vessels .. .. .	2,322
Anti-histamines .. .. .	1,451
Antacids .. .. .	1,324
Expectorants and Cough Suppressants ..	1,227
Sulphonamides .. .. .	1,271

The remaining expenditure was on a wide variety of drugs whose usage is not so common.

A dissection of the total cost of benefit prescriptions dispensed by chemists into cost of ingredients and chemists' on-cost is given in Table 11 on page 72.

### Legislation

One important change in the Pharmaceutical Benefits Scheme was the introduction of a certificate system which authorized the prescription of tranquillizing drugs listed as pharmaceutical benefits to certain classes of patients. This change, which was effective from 1st November, 1962, extended the availability of chlorpromazine hydrochloride and trifluoperazine. Persons discharged from an approved hospital at which they had received treatment for a psychiatric disorder may now be issued with a certificate which entitles them to obtain their maintenance supplies of these drugs from approved chemists on a doctor's prescription.

Both tranquillizers are available for the treatment of pensioners for any disease or purpose.

### Committees of Inquiry

Medical and Pharmaceutical Services Committees of Inquiry have been established in each State to consider possible breaches in the supply of pharmaceutical benefits. References concerning doctors are investigated by a Committee comprising the Commonwealth Director of Health for the particular State and four medical practitioners appointed by the Minister for Health from a panel of medical practitioners nominated by the Council of the State Branch of the Australian Medical Association.

Similarly references involving chemists are considered by a Committee comprising four members nominated by the Pharmaceutical Service Guild of Australia, the Commonwealth Director of Health of the State concerned, and a pharmacist who is an officer of the Department. During the year, of the cases considered by Medical Services Committees, six concerned the irregular prescribing of pharmaceutical benefits by doctors, whilst Pharmaceutical Services Committees considered 44 cases, the majority of which concerned the supply of pharmaceutical benefits which had been incorrectly dispensed.

### Pharmaceutical Benefits Advisory Committee

The Committee consists of nine members. The Australian Medical Association and The Federated Pharmaceutical Service Guild submit a panel of names selected from members of each profession, and from these panels the Minister appoints to the Committee six doctors and a pharmaceutical chemist. A pharmacologist and a Departmental pharmacist are also members of the Committee.

The Committee met on four occasions during the year and recommended the addition of 58 new preparations to the list of benefits. Of the drugs and medicinal preparations added to the general pharmaceutical benefits list, the most important were—

- (a) preparations used for the treatment of persons with colostomy or ileostomy conditions;
- (b) several new antibiotics;
- (c) two oral anti-diabetic preparations;
- (d) a synthetic penicillin;
- (e) an anti-hypertensive drug; and
- (f) a preparation for the treatment of leukaemia.

Included in the number of new drugs added to the list of benefits were twelve preparations that are restricted to the treatment of patients in hospitals approved to supply pharmaceutical benefits. Some 30 such drugs or preparations are now available on this restricted list of benefits and the Committee frequently reviews the list.

In addition to the above general matters, the Committee recommended that a number of additional forms and strengths of existing benefits should be added to the list. Included among these were the addition of another form of Pancreatin for the treatment of pancreas conditions, the fine particle form of an anti-fungicidal oral tablet for the treatment of certain skin complaints and a number of eye preparations.

The Committee has also reviewed the list of benefits extensively and recommended the removal of a number of drugs. Most of these were drugs which had been superseded by others that are more effective.



# TUBERCULOSIS DIVISION

AN INTENSIVE CAMPAIGN against tuberculosis was begun in 1948 following the ratification of an agreement between the Commonwealth and State Governments. This arrangement, as it was called, made the fullest possible provision for the diagnosis, treatment and control of tuberculosis without additional cost to the States and, almost without exception, at no charge to the patient.

As a result of the agreement, the Commonwealth has paid for all expenditure on new clinics and hospitals and for equipment of every kind. It has also paid for the increased maintenance costs of the campaign such as expenditure on mass X-ray surveys, clinics, tuberculosis hospitals and sanatoria.

The Commonwealth is also responsible for the payment of tuberculosis allowances, which were introduced in July, 1950.

It is the function of the Tuberculosis Division of this Department to co-ordinate the national campaign, to provide technical advice where possible and to encourage the States to progress from the stage of control of the disease to the path of eradication.

The past year has been notable in regard to progress and reappraisal of the national campaign against tuberculosis.

## COMMONWEALTH AND STATE MINISTERS CONFERENCE

A conference was held in Melbourne in April between the Commonwealth and the State Ministers for Health and their senior advisers on the subject of tuberculosis and of the Commonwealth-States Tuberculosis Arrangements. This conference was the first held since the initial conference in June, 1948, that resulted in the adoption of the original plan for the National Campaign against Tuberculosis.

The conference accepted the position that, although great progress had been made in the fight against tuberculosis, the incidence of the disease showed that there was no place for complacency.

The conference unanimously accepted some important recommendations. The first of these was that each State will direct that attendance at community chest X-ray surveys shall be compulsory and effectively enforced. The second was that the States will provide adequate chest clinics for the control of tuberculosis with sufficient full-time medical officers working under the State Directors of Tuberculosis.

The conference also accepted in principle the importance of some aspects of the National Campaign namely—

- (a) the necessity for the notification of sufferers with tuberculosis to the Public Health Authorities, and to see that this requirement is enforced;
- (b) the close follow up of "contacts" of notified sufferers from tuberculosis;

- (c) the importance of organizing routine chest X-rays of hospital in-patients and out-patients;
- (d) the desirability of encouraging private medical practitioners to remain in the forefront of the fight against tuberculosis by referring suspect patients to chest clinics and hospitals for examination;
- (e) the necessity for compulsory isolation of infectious "recalcitrant" or "asocial" patients;
- (f) the importance of tracing migrants, to see they are covered by normal X-ray procedures on arrival; as well as attendance at periodic community chest X-ray surveys, in view of the higher incidence of tuberculosis in this section of the population;
- (g) the special supervision of tuberculosis patients in Mental Institutions;
- (h) the necessity for the keeping of a current "live" Case Register of notified sufferers in each State, to see that patients are not lost from the necessary public health supervision and follow up.

## ANNUAL EXPENDITURE

Annual expenditure by the Commonwealth showed an increase in capital expenditure over the previous year, reflecting the provision of new X-ray and other equipment to the States. Expenditure on maintenance also increased due to increased costs of running hospitals and clinics, but there was a very slight decrease in tuberculosis allowance expenditure. Details of expenditure since 1949-50 are shown in Table 19 on page 75.

## SURVEY IN A.C.T.

A comprehensive epidemiological tuberculin skin testing survey was carried out on over 13,000 school and pre-school children in the Australian Capital Territory in July-August, 1962, to establish base-line figures.

Six hundred and sixty-nine children (including some who had had previous B.C.G. vaccination) who had positive tuberculin reactions underwent chest X-ray examination. Evidence of primary tuberculous infection of the lungs was detected in only two of these children who were aged 4 and 5 years respectively.

Following apparently normal chest X-ray examination, 212 children who had very marked "natural" positive reactions were considered possible subjects for chemoprophylaxis. After investigation and consultation with their private medical practitioners, 166 of these were started on a course of prophylactic treatment with Isoniazid (at 10 mgm per kilo of body weight) for 6-12 months.

## TUBERCULOSIS ALLOWANCE

The scale of weekly rates remained at—

	£	s.	d.
Sufferer with dependent wife ..	12	2	6
Sufferer with dependent child or children only ..	7	7	6
Sufferer without dependents—			
when not in an institution ..	7	7	6
when maintained in an institution free of charge ..	5	5	0
Allowance for children under sixteen years of age—			
First child ..	..	15	0
Other children ..	..	10	0

The number in receipt of the allowance again decreased slightly from 2,017 at 31st December, 1961, to 1,845 at 31st December, 1962. The decrease in numbers in receipt of allowances reflects to some extent the reduction in the average time of receipt of the allowance due to more efficient treatment.

## EPIDEMIOLOGY

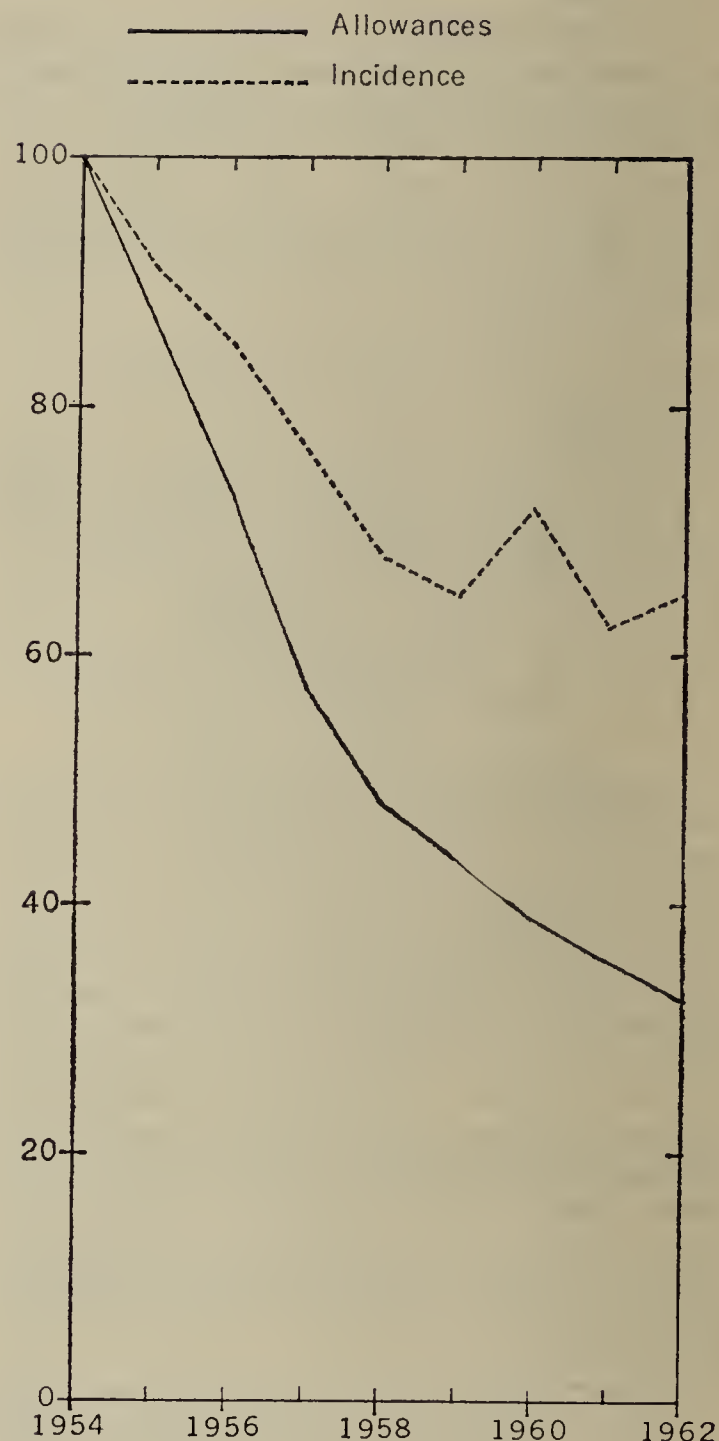
The series of statistical forms for State returns that have been introduced are still in a transitional stage but should give a clearer picture in the future of the problems of tuberculosis in Australia. The first complete return of this data should be available for the 1963-64 report.

At present the position in regard to tuberculosis in this country is that, while all ages are susceptible to infection, the disease most commonly affects adults and is of the pulmonary type. More than twice as many men are affected as women, the peak incidence for men being in the fifties and for women in the thirties, with only occasional adolescents or very

## TUBERCULOSIS

Allowances Current at 31st Dec.,  
and incidence per 100,000 population

Base Year 1954 = 100





young children being admitted to hospital. Very little disease is found in school children between the ages of four and seventeen years.

Indications from tuberculin testing suggest a gradual lowering of the rate of infection in the community, the primary infection however usually taking place in childhood or early adulthood, but not necessarily manifesting itself as disease until later adult life.

The interpretation of the tuberculin reactions is complicated by evidence of "non-specific" reactions from other "atypical" mycobacteria in the warmer States of Queensland and Western Australia, where some pulmonary disease from these mycobacteria is known to exist. The percentage of positive tuberculin reactors in the 10-14 years age group is 3.0 per cent. in Victoria; 3.8 per cent. in South Australia and 4.5 per cent. in the Australian Capital Territory, compared to 9.1 per cent. in Western Australia and 34 per cent. in Queensland. These age group figures are not available for New South Wales.

From investigations in South Australia, Western Australia and the Australian Capital Territory it has been found that there is a higher percentage of tuberculin reactors in children born overseas. This is in accord with the evidence that the incidence and prevalence of tuberculosis in persons born outside Australia is higher than that of the Australian-born and a large proportion of this infection occurs in full-fare paying British-born and Irish-born migrants.

## NOTIFICATIONS

As previewed in last year's report a slight upward fluctuation from 3,570 in 1961 to 3,825 in 1962 has occurred in the total number of notifications and this could again occur in the future, reflecting increased case finding by compulsory chest X-ray surveys.

Investigations into the "bacillary" status of notified cases showed that from 60-80% of these cases were actually confirmed to be excreting the tubercle bacillus. It is expected that a more accurate analysis will be made in the forthcoming year.

*The Mortality Rate* was again very satisfactory being 4.4 per 100,000 for all forms of tuberculosis, and 4.1 for pulmonary tuberculosis.

In recent years, due to the successful results of modern long-term treatment, very few persons die from the immediate effects of tuberculosis, and most of the deaths are in the elderly. The mortality rate is therefore no longer considered an adequate indication of the extent of the tuberculosis problem in developed countries and the emphasis is now on the incidence of new sufferers.

## PREVENTION

Preventative measures in Australia follow the lines of pre-embarkation chest X-rays of assisted passage migrants and in Australia the close follow up of "contacts" of known cases of the disease, the use of prophylactic chemotherapy with Isoniazid and the use of B.C.G. vaccine. The use of the latter vaccine is, in the main, restricted to negative tuberculin reactors in persons "at risk", namely, nurses, medical students and "contacts", but in two States, Victoria and South Australia, it is still used for school children. Its use is now mandatory for negative tuberculin reactors in Commonwealth public servants proceeding overseas to high incidence countries.

Prophylactic chemotherapy with Isoniazid is now firmly established in some States, being administered to recent tuberculin converters and massive reactors to tuberculin in school children, particularly in Western Australia, Queensland, and to some extent New South Wales, South Australia and Tasmania.

## CASE DETECTION—MASS MINIATURE RADIOGRAPHY

The overall yield from mass X-ray surveys in Australia is the immediate finding of over 1 active case of pulmonary tuberculosis per 2,000 persons examined. In all, 1,017 cases of active pulmonary tuberculosis were discovered from 1,752,265 examinations, with a further 619 suspect cases and 10,208 "inactive" cases requiring further supervision.

It will be interesting to watch future findings as a result of the more intensive compulsory chest X-ray surveys in Queensland, the enforcement of such surveys in New South Wales, and their commencement in Victoria.

It is noted there were 1,017 cases notified as a result of surveys out of a total of 3,503 for Australia. The great variation in the States in the rate of "inactive" tuberculosis discovered by mass surveys suggests lack of uniform standards in the interpretation of findings—see Table 20 on page 75.

Although mass chest X-rays still remain the most important source of discovery of sufferers with tuberculosis, existing State returns show they are very closely followed by hospitals and private medical practitioners. Chest clinics seem to be increasing in importance as a source of notification, no doubt due to the increasing follow up of cases of "inactive" tuberculosis discovered by mass surveys and of old cases of the disease that are now followed indefinitely because of the well documented risk of relapse.

## TREATMENT

The number of hospital beds, including Repatriation Department beds, in use for investigation and

treatment of tuberculosis patients is much the same as in the previous year, namely—

New South Wales ..	..	..	1,058
Victoria ..	..	..	802
Queensland ..	..	..	737
South Australia ..	..	..	268
Western Australia ..	..	..	174
Tasmania ..	..	..	167
Australian Capital Territory..	..	..	16
Northern Territory ..	..	..	74
Total ..	..	..	3,296

The treatment of tuberculosis is now more or less uniform throughout Australia, using the three main drugs Streptomycin, Isoniazid and Para-amino-salicylic acid. It is agreed in this country that it is desirable to admit all patients initially to hospital for sensitivity tests, for the instruction of the absolute necessity of taking drugs for the two year period of long term chemotherapy now considered essential to prevent relapse and to isolate them as long as they are infectious, the latter period now averaging only three to six months.



# **PUBLIC HEALTH**

THE PUBLIC HEALTH DIVISION is responsible for the preparation of the agenda for eight Committees and ten Sub-Committees of the National Health and Medical Research Council, and for the preparation of reports of all meetings.

It is through their reports that public health recommendations are presented to the National Health and Medical Research Council for consideration.

## **MEDICAL STATISTICS**

Australia's proposals for the Eighth Revision of the W.H.O. International Classification of Diseases have been forwarded to Geneva and extracts have been circulated to member nations for information by the Secretariat.

Work on several controversial sections is still proceeding, especially on the classification of Cardiovascular diseases, Perinatal causes, Collagen and Genetic diseases.

The Medical Certificate of Cause of Perinatal Death which was approved by the National Health and Medical Research Council has been subjected to several trials and has had some minor amendments incorporated.

A revised Medical Certificate of Cause of Death has been drafted by the Committee. This certificate will ensure more accurate reporting of causes of death and will provide the Bureau of Census and Statistics with additional useful data.

## **NATIONAL MORBIDITY SURVEY**

This survey, which was carried out by members of the Australian College of General Practitioners in association with the Medical Statistics Committee of the National Health and Medical Research Council, terminated on January 31st, 1963. Eighty doctors completed a full twelve months recording and over 300,000 cards have been received by the Bureau of Census and Statistics for processing.

In the forthcoming year the data, in tabular form, will be evaluated and written up as a special report of disease incidence in these practices throughout Australia.

## **DESICCATED COCONUT**

During the past year, the efforts of the Ceylon Coconut Board to improve the bacteriological standards of coconut exported from that country to Australia have proved very successful and no further consignments have been rejected on account of bacterial contamination with salmonellae.

## **TRAFFIC INJURY RESEARCH**

The recommendation of the National Health and Medical Research Council that 5,000 copies of the model form for the recording of traffic accident injury data be printed has been approved and the forms will shortly be available for distribution to general practitioners who desire to take part in this research.

## **SURVEY OF MEDICAL RECORDS OF BIRTH IN TASMANIA**

This Survey was undertaken by the medical profession in Tasmania, in collaboration with the State Department of Health, the National Health and Medical Research Council's Medical Statistics Committee and the Public Health Division of this Department.

The Survey comprised the detailed recording of particulars regarding the health of the mother, the labour and the infant in respect of 9,853 consecutive births. Professor S. L. Townsend, Department of Obstetrics and Gynaecology, University of Melbourne, compiled a comprehensive report on 240 tables prepared by this Department after the Bureau of Census and Statistics had completed the machine tabulation of the data and 300 copies of the report were forwarded to the State Health Department, Tasmania, for distribution to the medical profession in that State.

The following comment by Professor Townsend is worthy of mention:—

According to these Statistics, the standard of obstetric care in Tasmania is admirable and must be unsurpassed in any other English-speaking State in the world.

## **COMMONWEALTH POISONS REGISTER**

Work on the preparation of the Register of Poisons continued during the year. The initial work has been directed principally towards the collection of information concerning all pesticide, insecticide and herbicide products marketed in Australia, the number of formulations registered for sale being in excess of 3,000.



Technical details have been assembled for the first 1,200 of these preparations and collection of the required information for the remainder is proceeding.

Steps are being taken to obtain the services of a senior medical officer to undertake responsibility for the medical aspects (symptoms, antidotes and treatment) of the Register and their correlation with the technical data.

Printing of the first batch of completed cards will commence before the end of this calendar year.

#### ADVERTISING OF PROPRIETARY MEDICINES BY RADIO AND TELEVISION

The sections of the Broadcasting and Television Act relating to the censorship of medical talks and advertisements are—

Section 100.—(6.) A licensee shall not broadcast or televise an advertisement relating to a medicine unless the text of the proposed advertisement has been approved by the Director-General of Health or, on appeal to the Minister under this section, by the Minister.

Section 121.—(1.) Except as prescribed, a person shall not broadcast or televise a talk on a medical subject unless the text thereof has been approved by the Director-General of Health or, on appeal to the Minister under this section, by the Minister.

Details of commercials examined during the year are—

—	Approved	Approved as Amended	Rejected
Radio commercials ..	2,041	404	159
Television commercials ..	174	75	18

As these figures show, the number of scripts rejected was small and, while a considerable number required amendment, the degree of co-operation between the advertising and manufacturing industries and the Department has been excellent and no insurmountable difficulties have arisen.

In view of the possible toxicity of certain analgesics when taken indiscriminately, advertisers have been asked to insert the phrase "When taken as directed" after the claims for the product have been made. Advertisers were informed that, when claims for disease prevention are made for a product, these must be accompanied by scientific proof of the validity of the claims, otherwise the script will be rejected. There has been increasing emphasis on claims for "protection", especially in the vitamins field, and for the most part these have no scientific basis and could not be approved.

Work has proceeded during the year on a guide for the advertising of vitamins and the first draft of this document was prepared and submitted by representatives of the manufacturers of these products. It has now reached the stage when it can be submitted to the National Health and Medical Research Council for endorsement and it contains, in large measure, the principles which form the basis of Departmental policy on the censorship of commercials advertising medicinal preparations.

During the year some relaxation in policy was instituted regarding films on medical subjects. Medical drama, in which actors and actresses portray doctors and members of allied professions, are no longer subjected to censorship by the Department.

Any dramatized film dealing with a subject such as puerperal mania will not be approved as it would obviously cause unnecessary distress to expectant mothers. Other subjects may, from time to time, be added to the prohibited list.

Approval has been given to the telecasting of more operative detail than hitherto, as good surgery well presented is educational, though perhaps at times sensational. To adult audiences they should promote confidence rather than create apprehension.

Permission has been granted to sponsors of films of a medical education nature to telecast them for viewing by professional audiences either through closed circuit or at pre-arranged times after normal viewing hours.

The publication "Notes on Censorship of Matters of a Medical Nature" is currently being revised and brought up to date. Seventeen medical films were submitted for censorship. Nine were approved, one was approved with editing and seven were rejected. Two films were approved for closed telecast to members of medical and allied professions.

#### POLIOMYELITIS

In the year 1962-63 the incidence of poliomyelitis in all States was low. Thirty-five cases were confirmed by the Poliomyelitis Surveillance Committee. Details are given in Tables 22 to 24 on pages 76 and 77.

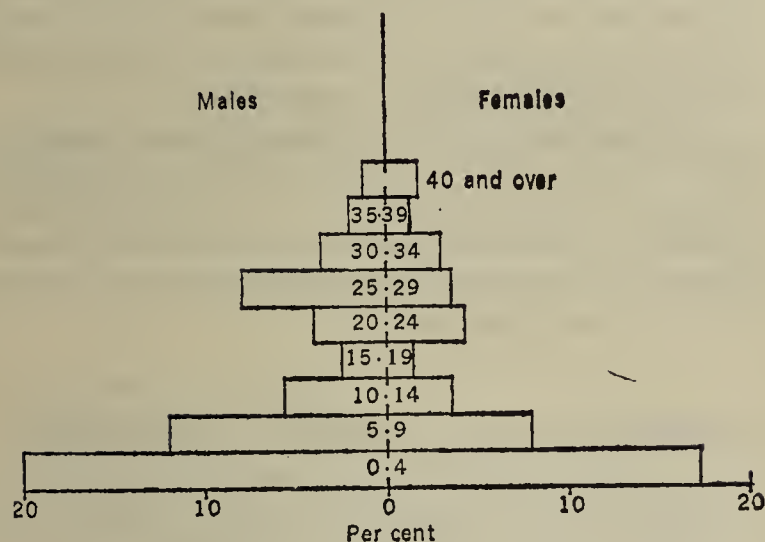
One-third of the cases have been in young adults. Virus isolations were successful in twelve cases only and no Type 2 poliovirus was found. The distribution of isolates was—

Type 1 poliovirus—Nine cases: Victoria six, South Australia two, New South Wales one.

Type 3 poliovirus—Three cases, all in Victoria.

The recommendation of the National Health and Medical Research Council that a fourth dose of Salk vaccine be given a minimum of one year after the third dose was implemented and an average of 31,000 doses of vaccine were issued each week to the States since January, 1963.

INCIDENCE OF POLIOMYELITIS  
1st July 1961 to 30th June 1963



One million doses of each of the three poliovirus types of Sabin vaccine, imported on the recommendation of the National Health and Medical Research Council, are held at Commonwealth Serum Laboratories for use in any future emergency, an emergency being defined as—

A situation in which the occurrence of poliomyelitis in a locality gives the State Health Authority reason to suspect that an outbreak is imminent or has begun.

Although the number of cases of poliomyelitis which occurred in Australia during the past twelve months was small, this should not be construed to mean that the danger of future outbreaks of poliomyelitis has disappeared. There is still an urgent need for all those who have not yet been immunized to avail themselves of the facilities offered by State and Commonwealth Health Authorities. Children and adults who have had three doses of Salk vaccine should present themselves for a fourth (booster) dose as soon as possible if they have not already done so.

Supplies of Salk vaccine are plentiful and the occurrence of even a small number of cases has demonstrated that virulent strains of Type 1 and Type 3 polioviruses are still circulating in the community.

#### NARCOTICS AND ANALGESICS

In the Annual Report of the Permanent Central Opium Board for the year 1962, statistics of the consumption of the major narcotic drugs in all countries during the years 1957-1961 inclusive were published as an appendix to the report.

The table below gives a comparison between Australia's consumption of several narcotics and groups of narcotics and the usage in four other comparable countries for the year 1961.

Australia, alone amongst the five countries listed, continues to report an appreciable rise in total and per capita consumption of codeine year by year. In fact, it would seem that the main reason for Australia's position as the fourth highest consumer of narcotics in the world is probably the high consumption of codeine. Coupled with the steady rise in codeine consumption there is no corresponding decrease in the consumption of other narcotics apart from a slow but steady decline in morphine

#### NARCOTICS AND ANALGESICS

Number of dosage units consumed per thousand of population:—

Substance	Australia	United States	Canada	United Kingdom	New Zealand	Australia's Position in World
Pothidine .. .. .	262	377	258	209	421	4th highest
Codeine (20 mg. dose) .. .. .	15,255	4,489	7,666	9,341	5,558	4th highest
Morphine .. .. .	999	340	241	1,081	537	4th highest
Hydromorphone .. .. .	47	118	..	..	..	5th highest
Methadone .. .. .	133	54	32	123	165	5th highest
Natural Analgesics .. .. .	1,046	623	274	1,236	537	4th highest
Synthetic Analgesics .. .. .	397	552	359	439	586	8th highest
Total Analgesics .. .. .	1,443	1,175	633	1,775	1,123	5th highest
Natural Narcotics .. .. .	17,152	5,549	8,271	11,358	6,901	4th highest
Synthetic Narcotics .. .. .	435	552	454	439	586	8th highest
Total Narcotics .. .. .	17,587	6,101	8,725	11,797	7,487	4th highest
Natural Antitussives .. .. .	16,106	4,926	7,997	10,122	6,364	4th highest
Synthetic Antitussives .. .. .	38	..	95	..	..	10th highest
Total Antitussives .. .. .	16,144	4,926	8,092	10,122	6,364	4th highest



consumed over the past five years. In world consumption of narcotics, natural antitussives, particularly codeine, continue to be the drugs in greatest use, amounting to 88 per cent. of the total.

On the other hand, Australia has a very small narcotic addiction problem, when compared with many other countries, so there is no evidence at present that the codeine consumed is causing any public health danger.

In order to clarify the position the pharmaceutical industry is co-operating with the Department, through the Drug and Allied Trades Council and the Ethical Manufacturers' Association in order that estimates of quantities imported and exported can be obtained and the Australian per capita figure for the consumption of codeine checked.

At the same time similar information is being sought regarding aspirin and phenacetin.

## CONFERENCES

### Joint F.A.O./W.H.O. Conference on Food Standards

The purpose of the Codex Alimentarius is to make available, in unified form, all internationally acceptable food standards in order to promote international trade in food, facilitate food standards' work in developing countries, protect consumers' health and ensure fair practice in the food trade. Geographically, the Codex will include all internationally valid standards, whether regional or world-wide.

A medical officer of the Department is a member of the Australian delegation to this Conference, which commenced in June, 1963. A joint meeting of representatives of the Food Standards and Food Additives Committees of the National Health and Medical Research Council was held on 5th June to assist in the preparation of a brief for the delegation, particularly on the food additives aspect.

### F.A.O. Conference on Pesticides

The Department was represented at the F.A.O. Conference on Pesticides in Agriculture, which was held in Rome in November, 1962. From resolutions made at the Conference, the Public Health Division has commenced preparation of information relating to pesticide registration and labelling legislation for dispatch to F.A.O.

### Committee Representation

The Division is represented on sub-committees which have been set up under the auspices of the Australian Agricultural Council to look into problems relating to the use of pesticides in agriculture in Australia.

The Division is also represented on committees which have been set up by the Standards Association

of Australia to deal with pesticides generally, Phenothiazine and plastic containers for poisonous substances.

## CUSTOMS (PROHIBITED IMPORTS) REGULATIONS

Data and description literature on imported therapeutic appliances and devices are referred, from time to time, by the Comptroller-General, Department of Customs and Excise, for advice concerning accompanying literature, therapeutic claims made and where there is doubt as to whether or not the device might constitute a danger to the user.

Referrals during 1962-63 totalled sixteen and included such items as electro-therapy apparatus, magnetic bracelets, infra-red and ultra-violet ray equipment, devices for massage and an electroscope claimed to be of use for medical diagnosis. Four items were not approved.

## IMMIGRATION MEDICAL SERVICE

During the year under review, the Department again provided medical facilities in Migrant Centres controlled by the Department of Immigration.

The Immigration Centre at Holden in Western Australia was re-opened during September, 1962, initially to accommodate migrants from Spain. The administration of the centre at Wacol in Queensland was transferred to Commonwealth Hostels Ltd. during April, 1963, and the Department's interest in the centre ceased on 30th June, 1963.

At the Bonegilla Centre, 271 beds, cots and bassinets are installed, while at the Scheyville, Wacol, Benalla and Holden centres first aid posts are manned for the benefit of migrants.

The number accommodated in all centres varied from a maximum of 2,360 in January, 1963, to a minimum of 1,301 in September, 1962. At Bonegilla the highest monthly intake of migrants was 1,366 in January, 1963, and the lowest monthly intake was 31 in July, 1962.

A total of 574 in-patients covering 3,997 bed days were treated at Bonegilla. 26,354 out-patients attendances were recorded, 462 infectious cases treated and 5,294 immunizations given at all centres. In addition, 69 minor operations were performed.

Staff figures at the commencement and end of the period were—

	1st July, 1962	30th June, 1963
Medical Officers .. ..	1	1
Nursing Staff .. ..	10	10
Orderlies .. ..	16	17
Others .. ..	28	22

# THERAPEUTIC SUBSTANCES

THE THERAPEUTIC SUBSTANCES Act and Regulations came into operation in 1956 for the purpose of controlling standards of therapeutic substances imported into Australia, traded interstate, or exported from Australia, in accordance with the standards fixed by the British Pharmacopoeia, the British Pharmaceutical Codex, or by Regulation.

Provisions of the Act and Regulations also apply to the standards of therapeutic substances supplied in the form of pharmaceutical benefits and to the Commonwealth Government and its authorities and in Commonwealth Territories.

Under these provisions a number of controlled therapeutic substances in the various pharmaceutical forms are subject on importation into Australia to examination in respect of packaging, labelling and conformity to standard.

To avoid undue delay to importers, the analyses are conducted by the Commonwealth Laboratories in the various States controlled by the Department of Customs and Excise.

## SUPERVISION OF DRUGS

In line with world-wide reaction to the tragic consequences occasioned by the administration of the drug thalidomide to pregnant women, action is being taken to expand and strengthen present controls on the importation of drugs and to arrange for a systematic evaluation of new drugs once within the country.

Item 28A of the Third Schedule to the Customs (Prohibited Imports) Regulations provides Commonwealth control over importation of therapeutic substances being—

- (a) sera, toxoids, toxins, antitoxins, antigens, vaccines and glandular extracts; or
- (b) antibiotic substances,

and in this limited field has provided a satisfactory means of control.

It is proposed that the broadened control over importation will be exercised through an Item in the Customs (Prohibited Imports) Regulations by adopting the class of substance to be controlled as “therapeutic substances” generally, thus superseding the existing Item 28A.

The table below shows details of the sampling of therapeutic substances for the year ended 30th June, 1963.

			No. of Samples—	
			Passed	Failed
New South Wales	..	..	186	62
Victoria	..	..	173	16
Queensland	..	..	1	..
South Australia	..	..	22	..
Western Australia	..	..	..	..
Tasmania	..	..	..	..
Total	..	..	382	78

## AUSTRALIAN DRUG EVALUATION COMMITTEE

An expert committee, known as the Australian Drug Evaluation Committee, has been set up to advise on the importation of new and existing drugs and the toxicity of drugs already available on the Australian market. This independent committee, which was formally set up in June, 1963, held its first meeting in July, 1963, in Sydney.

The Committee, whose seven members are eminent in the fields of clinical medicine and pharmacology, will report on the safety of drugs generally, will evaluate specific drugs referred to it by the Director-General of Health and will act as an independent arbiter in cases where an importer or manufacturer of drugs desires a review of a prohibition imposed by this Department.

The Committee, which was formed after consultation with the Australian Medical Association and the Royal Australasian College of Physicians, will have power to co-opt and seek advice from other members of the medical profession, the drug manufacturers and other sources.

A small section will be set up within the Department to attend to the administrative work connected with the functioning of the Committee and to carry out other Departmental functions in the field of drug supervision, such as authorizing the importation of new drugs on receipt of satisfactory protocols, and correlating information on all aspects of drug toxicity. This section will work in close liaison with overseas drug administrations, State Departments of Health, the medical profession, drug manufacturers and the World Health Organization.



# QUARANTINE

THE STANDARDS OF PUBLIC HEALTH in Australia are among the highest in the world. Many diseases of humans, animals and plants have not occurred in Australia and the Commonwealth Government is responsible for a strict quarantine service to ensure that they do not get in.

The activities of the Quarantine Service is divided into three Divisions, namely, human, animal, and plant, but there is complete co-ordination and co-operation between the three Divisions as many diseases are the common concern of all three.

The legal authority giving the Commonwealth Department of Health power to carry out certain precautions is obtained from the *Quarantine Act* 1908-1961 and the Regulations issued under the Act. The Act provides powers for all Divisions of quarantine, but separate Regulations are issued to provide the working machinery for each.

## ANIMAL QUARANTINE AND VETERINARY HYGIENE

To the Animal Quarantine Service the increase in speed and volume of travel, the increase in migration and tourism, and the increase in international trade and diversity of products of animal origin intended for importation into Australia have each brought with them an increase in the variety of problems for the animal quarantine administrator.

Increased knowledge of diseases, particularly in the field of virology, has not, unfortunately, given us tests whereby the existence of infection in animals of certain diseases may be detected with certainty and therefore it has been found necessary to maintain certain restrictions and prohibitions on the importation of animals.

The Quarantine measures for protection against the introduction of such diseases has included maintenance throughout the year of a complete ban on the importation of pigs, cattle, sheep, goats and all other ruminant animals; on birds, including poultry, except from New Zealand and on horses, dogs and cats except from the United Kingdom, Ireland and New Zealand.

## IMPORTATIONS SUBJECT TO QUARANTINE

### Domesticated Animals

Importations during the year comprised—

from United Kingdom, 74 horses, 527 dogs and cats;

from New Zealand, 486 horses, 168 dogs and cats;

total, 560 horses, 695 dogs and cats.

### Laboratory Animals

Recognized scientific institutions in Australia imported 183 small laboratory animals under quarantine permits during the year.

In addition the Commonwealth Serum Laboratories continued the importation of a limited number of monkeys from Asia for use in the preparation of Salk poliomyelitis vaccine.

### Zoological and Other Animals

A total of 211 animals were permitted to enter Australia for permanent quarantine in registered zoological gardens and circuses.

Consignments of queen bees and aquarium fish from overseas were inspected for disease and when found to be healthy were given quarantine clearance.

### Products of Animal Origin

In recent years, with the continuance of the total prohibition on importation of many species of animals, the movement in the animal quarantine work has been towards problems associated with products of animal origin which represent a risk of introducing exotic animal diseases.

A wide variety of goods subject to quarantine control were imported during the year including skins, wool, sausage casings, canned meats and other foodstuffs of animal origin. There were also small sample lines of several products admitted, under conditions of strict quarantine control, for examination and analysis by manufacturers investigating the practicability of marketing similar Australian-made products. After examination in this way the samples were incinerated.

### Biological Products

The implementation of Item 28A of the Third Schedule to the Customs (Prohibited Imports) Regulations continued to give quarantine control of imported therapeutic substances, such as sera, glandular extracts derived from animals and vaccines. A close liaison was maintained in this field with the associated sections of the Department, especially the Pharmaceutical Section and the National Biological



Standards Laboratory. All applications for permission to import were carefully considered to ensure that there would be no risk of introducing diseases of animals including exotic virus diseases.

The volume and variety of products in this category presented for consideration has increased appreciably in recent years and continues to increase.

#### EXPORTS SUBJECT TO QUARANTINE

It is the prerogative of all importing countries to formulate the health certification requirements for animals and animal products arriving into their respective countries. Negotiations continued with countries importing from Australia to ascertain full details of their current requirements and modifications to the requirements for import into Australia were recommended to prospective importing countries when necessary.

The principal animal exports were—

Horses	..	..	..	345
Cattle	..	..	..	9,738
Buffaloes	..	..	..	91
Sheep	..	..	..	251,590
Goats	..	..	..	710
Pigs	..	..	..	164
Dogs and cats	..	..	..	1,463
Poultry	..	..	..	814,554
Miscellaneous (including fish and birds)	..	..	..	15,818

Malaya was again the principal importer of Australian sheep for slaughter and a new development was a considerable increase in export of sheep for slaughter to Kuwait.

Exports were accompanied by health certificates issued by officers of the Animal Quarantine Division, together with appropriate certificates of testing for disease or vaccination against disease as specified by the importing countries.

#### ANIMAL QUARANTINE STATIONS

Some modernization of the accommodation for animals at the Sydney and Melbourne quarantine stations was carried out during the year.

#### MISCELLANEOUS QUARANTINE MATTERS

Customs officers and quarantine officers continued in close liaison at ports and air-ports and whenever risk items were detected they were seized and incinerated or re-exported at the importer's option and expense.

The establishment of the Central Office staff was expanded by the creation of two positions of senior veterinary officer to handle the increasing volume and variety of quarantine problems.

#### SERVICE PUBLICATIONS

In March, 1963, Dr. H. E. Albiston, D.V.Sc., C.B.E., commenced duties with the Division of

Veterinary Hygiene as Research Veterinarian and will be occupied for some time revising the Veterinary Service Publications of the Department.

These publications, standard reference books for the veterinary profession in Australia, have been issued to final year students in Veterinary Science at each Australian University and have been much sought after overseas. The current revision now being undertaken by Dr. Albiston will be a most valuable contribution to veterinary science, when completed.

#### DIAGNOSTIC FACILITIES FOR EXOTIC DISEASES

Because of the risk that would be entailed in importing exotic viruses into Australia for use in diagnoses here, arrangements have been made with overseas research institutions in countries where such diseases are already established, to receive specimens from Australia for diagnostic purposes should such diseases ever be suspected of being present here.

#### CONFERENCES

The Director of Veterinary Hygiene attended the Conference of Commonwealth Chief Veterinary Officers in London in September, 1962. He then visited Holland to inquire into measures regarding foot and mouth disease and conferred with Food and Agriculture Organization officers in Rome and also with the Director of Veterinary Services of the Department of Agriculture in Italy. On the return journey he inspected wool scouring facilities in Karachi and discussed exotic disease problems.

In January, 1963, he visited the Territory of Papua and New Guinea and West Irian to study quarantine matters related to the change in régime in West Irian.

The Director of Veterinary Hygiene addressed the Royal Agricultural Society of the British Commonwealth in Sydney and gave radio broadcasts on animal quarantine. He also represented this Department at meetings of the Standing Committee on Agriculture held in Perth in July, 1962, Canberra in October, 1962, and Melbourne in February, 1963. On each occasion he remained for the subsequent meetings of the Australian Agricultural Council.

Consultative Committee meetings on swine fever, held in Sydney in October, 1962, and February, 1963, were attended by the Director and Assistant Director of Veterinary Hygiene.

The Biennial Conference of Commonwealth and States Veterinarians, under the aegis of the Australian Agricultural Council was convened in Canberra by the Director of Veterinary Hygiene to consider legislative precautions designed to prevent the introduction of exotic diseases and to review



disease control measures in Australia. A report of the Sub-committee, formed following the previous Biennial Conference, to consider the threat of possible Screw Worm introduction into Australia from the North was presented to this year's Biennial Conference.

The Veterinary Public Health Committee met under the aegis of the National Health and Medical Research Council to confer on problems common to human and animal populations and was attended by the Director of Veterinary Hygiene. Items discussed included the control of Q. Fever, Marker Dye in Veterinary Penicillin, Antibiotics in Agriculture, Meat Inspection, Torulosis, Histoplasmosis, Toxoplasmosis, Hormones in Meat, Salmonellosis in Public Health, and the Incidence of Zoonoses in Australia.

The Commonwealth Veterinary Officer at Australia House attended the annual meeting in Paris in May, 1963, of the Office International des Epizooties as alternate delegate for the director of Veterinary Hygiene who is the Australian delegate.

As Chairman of the Cattle Tick Control Commission the Director of Veterinary Hygiene convened meetings in December, 1962, in Lismore, and in May, 1963, in Brisbane.

## **PLANT QUARANTINE**

During the year the Plant Quarantine Division maintained its vigilance by the routine inspection and interception of plant material disease organisms and insect pests arriving from overseas as freight, at the post offices and accompanying passengers arriving by ship and air from abroad. This entailed detailed inspection and treatment, where necessary, of items such as seeds, timber and any plant material of an unprocessed nature.

Vegetative plant material for growing purposes was channelled to post-entry quarantine. As a result of a deliberate policy the volume of imports of nursery stock has been kept at a manageable level and thereby the quarantine risk, inseparable from the importation of live plant material, has been minimized.

The importation of seed, which is restricted by quarantine legislation, has continued to be handled under strict quarantine supervision by the C.S.I.R.O., State Departments of Agriculture, Universities and other Institutions, such as the Waite Agricultural Research Institute.

## **SAFFLOWER**

During the year there was notably increased interest in vegetable oil crops—particularly safflower. An American company expressed a desire to import up to 500 tons of Gila safflower to stimulate this industry in Australia, particularly in

Queensland. This would have entailed a distinct quarantine risk because two serious safflower diseases, Rust, of which there are several physiological phases, and Fusarium Wilt, may be carried with the seed. The C.S.I.R.O. and the Queensland Department of Agriculture had introduced the particular variety as small samples of seed and grown it under quarantine supervision a short time previously, however, thus making it possible for a quantity of Australian-grown seed to be made available. The particular company subsequently bulked-up the seed of this particular variety.

## **COTTON**

Considerable interest is being manifested in cotton growing throughout Australia, particularly in New South Wales, and the importation of cotton seed has been carefully controlled for many years to prevent the introduction of damaging insect pests and diseases. It has been the practice to allow new varieties to be introduced as seed in small quantities, up to 5 lb., for growth, after special seed treatment, under official quarantine supervision. By this means the potential cotton industry is safeguarded and yet the local growers have the benefit of varieties developed overseas. There have been representations for the bulk importations of cotton seed from the United States of America, but all such applications have been refused because it would involve a serious quarantine risk.

## **POP CORN MACHINERY**

An interesting instance of plant quarantine activity relates to second-hand pop corn machinery which was imported from the United States of America for use in Armidale. When it was found to be contaminated with maize grain, maize trash and soil, the machinery was completely dismantled, thoroughly cleaned and disinfected and the material cleaned from it incinerated. This precaution was necessary to avoid the risk of introducing Boil Smut, a serious disease of maize and related plants in the United States of America and other countries overseas but not established in Australia.

## **TIMBER**

Although tariff restrictions were imposed in 1962, timber imports were still extensive. At several points of entry timber imports made heavy demands on plant quarantine personnel and facilities. Large shipments arrived from Malaya, Borneo and other countries to the north of Australia. Some shipments were found to be infested with Scolytid, Platypodid, Cerambycid and Bostrychid beetles. Cerambycid and Buprestid beetles were found in Oregon from North America. Over the year an increasing proportion of logs imported from South-East Asia required treatment for Ambrosia Beetle.



## PARASITES AND PREDATORS

With the approval of the Plant Quarantine Division many parasites and predators were imported by Government authorities for the control of various pests and weeds. Notable among these were the beetle *Mecas saturnina* for the control of *Noogoora Burr* and *Aphidius sp.*, a tiny wasp parasite of the Carrot Aphid *Cavariella aegopodii*, and three species of *Rhyssa* and one of *Ibalia* for use against the *Sirex* wasp—*Sirex noctilio*.

## SECOND-HAND VEHICLES AND MACHINERY

Soil on second-hand motor vehicles and earth-moving equipment is causing considerable concern to the Plant and Animal Quarantine Divisions. Arrangements are in hand for providing suitable facilities at the main ports of entry for the proper and thorough cleaning of all vehicles found carrying soil.

## CONFERENCES

Representatives from the Division attended the Seed Testing Conference organized by the C.S.I.R.O. Liaison Section held in Melbourne.

A Plant Quarantine Conference was held in Canberra late in 1962. In addition to the Chief Quarantine Officer (Plants) from each State there were in attendance other State officers and representatives from Commonwealth Departments as well as the C.S.I.R.O. interested in plant quarantine activities. This conference, covering the many phases of plant quarantine activity, proved most helpful to plant quarantine administrators throughout Australia. It is proposed to make it a biennial event.

Late in July, 1962, the Director spent two weeks in New Zealand discussing mutual quarantine problems with Department of Agriculture officials. Discussions also took place with Forestry officers on the *Sirex* Wood Wasp. Visits were made to both the North and South Islands.

In January, 1963, the Assistant Director accompanied the Director of Veterinary Hygiene on a visit to Papua and New Guinea, including West Irian, with the object of assessing the animal and plant quarantine risk involved in the change of administration for West Irian from Dutch to Indonesian control.

It has been decided to continue the campaign of survey, eradication and research under the National *Sirex* Fund until June, 1964, the Commonwealth sharing equally with the States in providing a further £200,000. In addition, private forest interests have volunteered to make a contribution to the fund. The Director of Plant Quarantine is chairman of the National *Sirex* Fund Committee. The Sub-com-

mittee for Eradication, whilst organizing surveys in all States, has directed its main efforts in Victoria to defining the infested area and eradicating the pest where it is found. Research work is being undertaken in Tasmania, South Australia and Canberra by C.S.I.R.O., Waite Agricultural Research Institute and Forestry and Timber Bureau with co-ordination from the Research Sub-committee.

## PUBLICITY

The Plant Quarantine Publicity Campaign was carried on vigorously during the year. Demand for literature, particularly the "Motorist's Guide to Plant Quarantine" and the folder "Travelling?", was keener than ever, excellent distribution having been obtained through motoring organizations like the N.R.M.A. and the Shell Touring Service. There was also good distribution through motels.

New publications produced during the year were a special guide on plant quarantine requirements for travellers from Papua and New Guinea, a give-away folder for show use entitled "Purpose and Practice of Plant Quarantine", and a new blotter for school children.

Exhibits were staged at agricultural shows at Nowra, Canberra, Sydney, Adelaide, Melbourne, Perth, Launceston, Hobart and Devonport.

A steady demand continued for Plant Quarantine films through the National Library and State film centres, while work started on a film strip for use in schools. This strip will be supplied to 3,000 schools in New South Wales, then to schools in other States.

A new poster was produced during the year for use in railway advertising sites and a second new poster is in production.

Work carried out on behalf of the National *Sirex* Fund Committee included preparation of a coloured brochure and an accompanying poster and arrangements to have these publications distributed among State, private and denominational schools in certain areas of Victoria, New South Wales and South Australia.

## HUMAN QUARANTINE

The Quarantine Service was maintained during the year ending 30th June, 1963. No case of quarantinable disease was encountered during this period.

Outbreaks of cholera occurred in South-East Asia and in islands to the north of Australia, and combined with the increasing air traffic from these areas to Australia, the threat of the introduction of quarantinable disease into Australia has increased.

During the year under review, Quarantine Proclamations were gazetted declaring the following areas infected with cholera:—

- (i) West New Guinea (West Irian)
- (ii) the Colony of Hong Kong
- (iii) the Republic of Indonesia
- (iv) the Republic of the Philippines
- (v) Sarawak
- (vi) the Federation of Malaya, and
- (vii) the State of Singapore.

Quarantine stations at the principal ports of entry were kept in readiness for any emergency and a total of 25 persons were detained in these stations during the past year.

At the Quarantine Station in Darwin, eight people were detained. Six of these were persons who entered Australia without current smallpox vaccination certificates and refused to be vaccinated and they were detained in quarantine for fourteen days from the date of departure from their last overseas port. Two persons were detained because they had arrived from a yellow fever area without a proper vaccination certificate. These persons were detained for six days from the time they had left the yellow fever area.

At the Sydney Quarantine Station, fourteen persons were detained. Twelve had arrived by air from overseas without a current smallpox certificate. One person was detained as a suspected case of cholera but further investigations revealed that the man did not have cholera. One person was detained in the quarantine station for five days because he arrived from an infected cholera area without a cholera vaccination certificate.

In Melbourne, two coloured crew members were removed from an overseas vessel and detained in a

quarantine station because of the possibility of smallpox, but investigations subsequently revealed that they were suffering from chicken pox.

In Brisbane, one suspected case of smallpox was isolated at the quarantine station. Investigations, however, proved that he was not infected with the disease.

Two outbreaks of typhoid fever occurred on overseas vessels bringing migrants to Australia. The Dutch vessel *Tjiwangi*, which arrived in November, 1962, brought a group of White Russians from Hong Kong, and when illness broke out on the vessel 146 White Russians were admitted to Bonegilla Migrant Centre for observation following the arrival of the vessel at Sydney. Although passengers from *Tjiwangi* had dispersed to all States, the main outbreak was confined to Bonegilla, where nine cases were isolated.

An outbreak of typhoid fever occurred in Western Australia, Victoria, New South Wales and Queensland, which was subsequently traced to passengers who had recently disembarked from the Italian vessel *Roma*. This vessel had brought over a thousand migrants from Italy to Australia and these migrants had disembarked at Fremantle, Melbourne, Sydney and Brisbane. Fourteen cases of typhoid fever were diagnosed in the States and all passengers who had disembarked from the vessel in Australia were contacted by the State health authorities in an endeavour to isolate and prevent its spread into the community.

The Quarantine Service arranged for examinations, including laboratory investigations, to be carried out on the crew of the *Roma* who were concerned with food handling. These investigations resulted in identifying a member of the catering staff as a typhoid fever carrier.



# TERRITORY HEALTH

THE ADMINISTRATION of health services in the Australian Capital Territory and the Northern Territory is the direct responsibility of the Minister for Health through the Department of Health.

The Department is called upon to perform certain duties which in the States would be carried out by local government instrumentalities.

## AUSTRALIAN CAPITAL TERRITORY

### HEALTH LABORATORY

The Commonwealth Health Laboratory, situated at the Australian Institute of Anatomy, provides full clinical laboratory services to the Canberra Community Hospital and adjacent hospitals and to private medical practitioners in the area.

During the year the Laboratory carried out investigations in the public health and medico-legal fields.

The number of pathological services carried out during 1962-63 totalled 238,950 and the number of patients who attended was 66,673.

### DISTRICT NURSING SERVICE

During 1962-63 six sisters (providing a seven day week service) made 15,777 visits. The monthly average of patients attended was 151 and the average number of patients on the books at the end of each month was 75.

Throughout the year liaison was maintained by the Sisters with agencies engaged in social welfare work.

### HEALTH INSPECTION

A staff of four inspectors under the Medical Officer of Health was engaged upon public health inspections.

The following licences were issued under the Public Health Ordinance during the year:—

Prepared meat goods vendors	..	141
Ice cream vendors	..	9
Barbers' shops	..	53
Milk distributors	..	78
Milk vendors	..	172
Milk shops	..	151
Eating houses	..	62
Meat vendors	..	46
Boarding houses	..	35

Samples submitted for analysis were—

Water chemical	..	843
Water bacterial	..	1460
Milk chemical	..	211
Milk bacterial	..	410
Other foods bacterial and chemical	..	28
Sewage samples	..	76

Quarantine inspection of parcels arriving under bond at the Canberra Post Office was carried out by the inspection staff.

Cases of infectious and notifiable diseases notified were—

Acute Rheumatism	..	1
Erythema Nodosum	..	2
Infantile Diarrhoea	..	13
Infectious Hepatitis	..	32
Malaria	..	1
Meningococcal Infection	..	3
Ophthalmia	..	6
Rubella	..	26
Salmonella Infection	..	3
Scarlet Fever	..	6
Tuberculosis	..	16

Legal action was taken in three cases for offences against the public health regulations.

## CHILD HEALTH AND WELFARE

### Infant Welfare

A staff of nine triple certificated sisters employed by the Canberra Mothercraft Society maintained fourteen Baby Health Centres which provided a nursing advisory service, including home visits. During the year 4,225 babies attended the centres and 7,069 home visits were made.

The Canberra Mothercraft Society, subsidized by the Commonwealth Department of Health, administered the Infant Welfare Service in Canberra.

### Pre-School Children

Medical examinations of children aged 4 years were carried out at all Pre-School Centres. In all 935 children were examined and, in most cases, the child's mother was in attendance. Defects found were—

Vision 34; hearing 13; nose and throat 23. In addition there were 82 cases of minor hearing loss and miscellaneous defects.

### School Children

A total of 5,202 children were examined. Defects notified were—

Vision 436; hearing 48; nose and throat 67. There were 221 cases of minor hearing loss and miscellaneous defects.

Personal interviews with 273 parents were arranged. Monthly visits from the Commonwealth Acoustic Laboratory audiologists continued throughout the year and 96 cases were tested.

The class for educating partially deaf children continued to function at the Ainslie School. The School Medical Service and also the Commonwealth Acoustic Laboratory audiologists were available to give advice when required.

### Free Milk

Some 11,700 children attending schools in the Territory were each eligible to receive one-third of a pint of milk a day. This milk was provided under the *States Grants (Milk for School Children) Act 1950*.

### School Dental Service

The number of children treated by the School Dental Service totalled 8,232. As in previous years visits were made by Dental Officers of the Service to Jervis Bay, the Wreck Bay Aboriginal Station, Norfolk Island and the Cocos (Keeling) Islands.

### IMMUNIZATIONS

Sessions were held regularly at Baby Health Centres for Triple Antigen and Poliomyelitis immunization. Injections given at the Triple Antigen Clinics numbered 8,625.

The number of Poliomyelitis injections given during the year were—

School children	..	..	14,134
Babies	..	..	9,567
Adults	..	..	7,392

### VETERINARY SERVICES IN THE AUSTRALIAN CAPITAL TERRITORY

The functions of the veterinary service of the Department within the Australian Capital Territory include the prevention and control of disease in stock, advice to district stock owners with field diagnosis on a herd or flock basis supported by laboratory confirmation, the supervision of the hygiene of dairies and piggeries and the control of the Canberra Abattoir.

### Field and Laboratory Veterinary Service

Heavy rain in the early spring which carried through into the summer resulted in ideal conditions for the build up of barber's pole worm infestations during 1962-63 and frequent drenching against this parasite was necessary. These wet conditions have also favoured the life cycles of the fluke snail and consequently of the liver fluke.

However useful rains falling throughout March followed by good follow-up rains in April considerably improved pastures and crop growth so that the likelihood of fluke infestation, both acute and chronic, due to stock grazing close to springs and watercourses has been reduced.

Several properties were quarantined for the presence or suspected presence of contagious footrot of sheep and eradication procedures undertaken either by controlled movement for slaughter or treatment of the flock.

As a check on the swine fever status of pigs in the Australian Capital Territory serum samples were forwarded to the C.S.I.R.O. and to the Veterinary Research Station, Glenfield. Examination of these samples revealed the pigs to be free from Swine Fever.

Periodical inspections of all piggeries both in the Australian Capital Territory and those immediately adjacent to its borders within the Braidwood Pastures Protection District were undertaken during the year as a safeguard against the introduction of Swine Fever into the Australian Capital Territory.

A heavy infestation of nodule worms was noted in a sheep presented for examination at the Institute of Anatomy. While this worm is comparatively rare in the Southern Tablelands it appears that it is becoming established. Advice was given on its treatment and control.

A heavy infestation of black scour worms was noted in lambing ewes in the spring and was apparently due to a too high stocking rate.

Advice was given to stock owners on disease problems and autopsies and specimen examinations carried out in the field or in the laboratory at the Australian Institute of Anatomy.

Radio broadcasts on subjects of topical interest to landholders in the Australian Capital Territory, namely, fluke infestation of sheep, footrot and hydatids, were given over Station 2CY.

Surveillance was kept over stock moving into the Australian Capital Territory to guard against the introduction of disease and health certificates issued, following examination, for animals leaving the Australian Capital Territory both for overseas and to other Australian States.

### Routine Veterinary Services

Frequent inspections were made of dairy premises to ensure that standards of hygiene were maintained at a high level. A further two dairymen have begun work on the construction of new dairies, one of which will be of the "herring-bone" type.

A total of 2,277 dairy stock were subjected to an intradermal tuberculin test. All cattle tested gave negative reactions.

Throughout the year 361 heifer calves were vaccinated with Strain 19.

Stock sales were attended and examinations made for the presence of notifiable diseases, particularly lice and ked infestation and footrot of sheep. Infected mobs were returned to their properties of



origin under an Order for Movement. A number of cases of eye cancer and actinomycosis were forwarded for slaughter only to abattoirs on an Order for Movement.

### Canberra Abattoir

Canberra Abattoir is managed by the Division of Veterinary Hygiene. A Veterinary Officer is Superintendent and there is a Commonwealth staff of thirteen including two meat inspectors.

The abattoir is operated on the solo system with the Department providing the facilities for the slaughter, dressing and chilling of sheep, cattle and pigs. Licences are granted to various firms and butchers to use these facilities and these operators employ their own staff. During the year nineteen licences were issued.

The veterinary activities carried out at Canberra Abattoir, in addition to management and supervising of meat inspection, include the use of abattoir facilities—

- (a) For the C.S.I.R.O., Division of Plant Industry, for investigations into the effect of clover on the uterus of sheep and into beef raising
- (b) To provide biological material for the National Biological Standards Laboratory, the Australian National University's departments of Microbiology Physiology, Zoology and the John Curtin School of Medical Research and for the Entomology Branch of the C.S.I.R.O.

The year has seen greatly increased activity at the Abattoir.

The throughput figures were—

—			1961-62.	1962-63.
Sheep and lambs	..	..	80,962	103,387
Cattle	..	..	7,158	9,674
Calves	..	..	769	2,132
Pigs	..	..	7,337	7,417

## NORTHERN TERRITORY

This year again saw an increase in the work load in almost all Departmental activities in the Northern Territory. Even in the field of quarantine where significant falling off was confidently anticipated, the expected easing of the burden did not eventuate.

An increase in all phases of activity in Hospitals throughout the Northern Territory occurred and this year has marked final acceptance of the programme for future expansion at the Darwin Hospital—a major undertaking spread over several

years which will provide a modern Hospital with first-class equipment to serve the inhabitants of the Territory.

After early staffing difficulties, the Field Health Inspection Section is now in full operation and valuable work is being performed. As part of the activities in this field, preliminary surveys of hook-worm control have been commenced with the object of initial control and eventual eradication programmes being instituted.

A new development is the work being carried out in collaboration with the Australian Stevedoring Industry Authority on working conditions in that Industry. A pilot survey of working conditions in Darwin has been completed and arrangements made for a detailed investigation of the effects of environmental temperatures and humidity on the comfort, safety and efficiency of those working in this port.

The recruitment of a fourth Survey Sister and the further development of the Survey Section has made it possible for us to extend our effective coverage over the entire Territory. These triple certificated Sisters will shortly be in the position to see every Aboriginal in the Territory at least once every year. Although particular emphasis is placed on infant health and the well-being of the vulnerable groups, these Sisters play a vital part in the leprosy control campaign and assist materially in the control of communicable disease. A special expedition of the Senior Survey Sister into Eastern Arnhem Land resulted in contact being made with 105 Aborigines. Forty of this group had not previously been in contact with any European and their existence was unsuspected.

The appointment of a Chest Physician—Tuberculosis was a further step forward in the campaign against this disease. The commencement of a mass chest survey in June is the first step in the expanded programme of case finding and review with the eventual aim of eradication of the disease from the Northern Territory.

### SCHOOLS MEDICAL SERVICE

During the year sixteen schools were visited. All pre-school attenders, new entries, those leaving school and children who had not been examined for two years or more were examined, the total number being 2,415.

The general health of the school children continues to be satisfactory. The main defect found, as in former years, is defective eyesight. The Ophthalmic Specialist has rendered extremely valuable help in this field. Speech defects have been found in a number of children. The problem of retarded and mentally handicapped children is a growing one and the position is aggravated by the remoteness of the Northern Territory from specialized centres equipped to handle these cases.



## **INFANT HEALTH CLINICS**

### **Darwin**

There has been a further increase in attendances at the Darwin Centre and Sub-centres, attendances in 1962-63 exceeding last year by over 1,000.

Home visiting is still increasing, especially in the new Rapid Creek Subdivision and this trend is likely to continue with the development of new suburban areas.

### **Alice Springs**

There are several factors in the Alice Springs district which deserve special consideration. New enrolments at the Clinic totalled only 160 in spite of the fact that 252 new-born babies were visited in hospital, reflecting the fact that in the Alice Springs Hospital large numbers of children are born to mothers who come from out-back stations. They are visited in the hospital by the Infant Health Sister, but on discharge are cared for by the Aerial Medical Service and Survey Sections.

## **COMMUNICABLE DISEASES AND TROPICAL DISEASES**

### **Ankylostomiasis**

Investigation into the use of sea-water in water-carriage sewerage systems, utilizing the newly available epoxy compounds resistant to corrosion, is in progress in one coastal mission. The Senior Health Inspector, Hygiene Section, and the newly appointed Technical Assistant, a full blooded aboriginal, have commenced pilot surveys of the incidence of infestation and these will be followed up with post treatment stool examinations. The initial stages therefore of a full scale hookworm control programme have been commenced and this will later develop into a campaign aimed at the eradication of the parasite from the community.

### **Malaria**

Only two cases of malaria were recorded this year. Both of these were imported cases and no indigenous case was discovered.

The initial stages of an eradication programme have been completed with mass treatments at the Roper River Mission, Mainoru, Rose River Mission, Roper Bar, Urapunga and Roper Valley. Following the mass treatments, blood films from 186 persons resident at the Roper River Mission were examined during May, 1963, when transmission might have been expected to occur and these films were all negative.

The campaign against importation of the disease has been maintained as the aerial service to Portuguese Timor has now increased to one plane a week. A particular watch is kept in order that the previous introductions from this endemic area are not repeated.

### **Leprosy**

Forty-three patients from 22 places were notified this year. The drop in the number of notifications is an encouraging sign.

The outstanding development during this year has been the introduction of reconstructive surgery which was commenced in February, 1963. The availability of these modern techniques has been a tremendous morale booster for leprosy sufferers in the Territory. In addition to the great value in restoring useful function to those previously crippled, the cosmetic advantages also must not be forgotten.

Another development this year has been utilization of microphotography as a method of recording and classifying smears from cases at the Leprosarium. This has enabled an exact assessment of progress to be made and the permanent records obtained will increase in value over the years.

A start has been made of the use of injectable long-acting Sulphones for the treatment of certain selected cases to achieve more satisfactory control of difficult outpatients.

### **Trachoma**

Visiting of remote areas by the Ophthalmic Surgeon commenced in 1962-63 and one result has been an increase in the number of cases notified. Many people suffering from the results of old infection have been brought to Darwin and Alice Springs for specialized surgical attention.

### **Tuberculosis**

The appointment of a Chest Physician has meant the establishment of tuberculosis control on a firm basis. A further mass chest X-ray survey was commenced in June, 1963.

### **Typhoid**

The detection of a Typhoid carrier from Oenpelli followed an intensive search using vi-antigen testing of serum from a large number of people. This testing was carried out by a team from the South Australian Institute of Medical and Veterinary Science. The patient was not clinically ill but was discovered to have a pathological gall bladder harbouring the active organism. Phage typing confirmed that this was E.1, the strain responsible for the majority of cases in the Oenpelli area. Since this discovery no further cases have occurred.

The news that a clinical case was present in the Alice Springs area towards the end of 1962 resulted in intensive public health activity with over 4,000 people receiving two injections of T.A.B. vaccine and 2,659 completing a full course. No secondary cases resulted.



## DARWIN HOSPITAL

A 70 mm. chest survey unit began operation in the Out-patient Department of the Hospital in March, 1963. All out-patients over 15 years of age, and all routine admissions to the Ward are invited to submit to the examination if they have not had a chest X-ray in the preceding ten months. With the number of patients passing through the Hospital, the Unit will be of great assistance in tuberculosis detection in the Darwin Area.

A new block containing two operating theatres and central sterilizing department was completed on 17th November, 1962, and was officially opened by the Minister for Health. The subsequent modification of the building in 1963 to provide additional clearing-up space and sterilizing equipment will enable both theatres to be utilized on a full-time basis.

Renovation and extension to the X-ray Department in the site of the old operating theatre has proceeded according to plan. The new Watvic Konrad 600 diagnostic X-ray Unit has been in operation since 15th May, 1963, and additional storage and office facilities in the Department are already in use.

The average bed utilization for the year 1962-63 is 80.4 per cent. compared with 76.6 per cent. in 1961-62. Beds occupied on 30th June, 1963, were 256 as compared with 206 on 30th June, 1962. These figures give some indication of the increasing numbers of patients requiring Hospital care.

## ALICE SPRINGS HOSPITAL

The cause of the infant native mortality is a subject of research and investigation by medical officers and ancillary services at this Hospital. No conclusive facts have yet emerged from these investigations, apart from the fact that the mortality rate is ten times that of children reared under a normal European régime. The vulnerable age appears to be at the weaning period and the underlying pathology points at present to failure in basic nutrition in an environment unfavorable for normal physiological function.

## KATHERINE HOSPITAL

Admissions to the Katherine Hospital increased during the year, 660 patients being admitted compared with 591 for 1961-62. There was also a substantial increase in the number of children born at the hospital, 66 this year as against 47 in the previous year.

An Infant Health Clinic is conducted by the Matron each month and with the increased number of births there was increased attendance at the Clinic. Every five weeks Clinics are held at Moline and Pine Creek and attendances at these Clinics also increased.

A contract for the construction of a new ward at the Hospital was let on the 22nd May, 1963, but at 30th June, 1963, work had not commenced.

## TENNANT CREEK HOSPITAL

A new ward providing air-conditioned accommodation for fourteen adults and two children was opened on 18th November, 1962. This ward provides cooler and more hygienic conditions than were previously available. During the year 695 patients were admitted to the Hospital, including 48 maternity cases and 191 native patients.

The X-ray Department was improved by the installation of water-cooling and softening apparatus and 1,009 X-ray examinations were carried out.

## AERIAL MEDICAL SERVICE

Further re-organization took place during the year. Now that a standard fleet of de Havilland Dove aircraft is available, a more even pattern has been reached in operations.

Visits by specialized staff such as Dentists, Ophthalmologists, Health Inspectors and the Pathologist to remote areas continued and the development of a mobile laboratory commenced. This is initially limited to simple Parasitology and Haematology but the intention is to add further techniques. The year 1963-64 will, it is hoped, see the advent of mobile X-ray equipment which will be carried by the Aerial Medical Service.

There has been an increase in emergency flights, but further re-organization and more efficient utilization of aircraft enabled a slight reduction in the number of routine flights. More places, however, are opening airstrips and requiring visits. For example, Bulla Station, League and Calvert Hills have already been added and Daly Waters will be taken over by the Aerial Medical Service from the list of places visited by the doctor from Katherine. It is anticipated that this trend will continue and routine flights will therefore tend to increase in number.

Details of flights made during the year are—

			Darwin.	Alice Springs.
Emergency flights	..	..	223	..
Routine flights	..	..	105	103
Hours flown	..	..	1,243	357
Miles flown	..	..	157,122	45,615
Landings	..	..	954	412
Patients carried	..	..	594	51

## SURVEY SISTERS

This year has seen a great increase in the work carried out by the Survey Sisters. Coverage has been extended to the entire Territory.

Commencement has been made with vaccination against Smallpox in coastal populations where risk of introduction of this disease from endemic areas to the North of Australia is a possibility.

Survey Sisters have received training from the Schools Medical Officer in the use of portable audiometers and initial services have commenced on children in remote areas. It is intended to screen populations, with particular emphasis on children, and those showing hearing loss will be fully investigated by the Schools Medical Officer who has received specialized training in this field.

## HEALTH LABORATORIES

### Darwin

The statistics of the number of tests done in the Laboratory show a marked increase. Whereas in 1960 the number of tests per month was of the order of 4,000 it is now over 6,000.

In the bacteriology section a considerable portion of the work is devoted to the examination of stools. Of 70 isolations of *Shigella*, 44 were *Sh. sonnei* and the remainder *Sh. flexner* 50 of the cases being Europeans.

*Salmonella typhi* was isolated in one case, and one each of *S. anatum*, *S. eastbourne* and *S. oranienburg* were found. The sources of these were widely separated.

Acid-fast bacilli were isolated from 22 patients, half of whom were natives. Eight of the cases were *Anonymous Mycobacteria*.

*Malleomyces pseudomallei* was isolated from the urine of a patient, adding one more case of Melioidosis to the two cases investigated last year.

The necessary serological and biochemical tests were done in the laboratory for six exchange transfusions done in Darwin Hospital, one being for an ABO incompatibility. Arrangements have been made with Brisbane Hospital for the carrying out of the appropriate investigations in suspected cases of Thalassaemia which are likely to occur from time to time as there is a large population of Mediterranean stock in Darwin.

### Alice Springs

The work of the Alice Springs laboratory increased this year when compared with 1961-62. The bacteriology and histology work is still sent out, mainly to the Animal Industries Branch, Alice Springs.

## DENTAL SERVICES

The programme of renewing and improving facilities at the Darwin Dental Clinic is proceeding.

All centres involved were visited at least once during the period under review by aerial mobile clinics, while the overland mobile branch of this service was the subject of increased activity.

The School Dental Service proceeded as usual in the Alice Springs area but no treatment at all was administered at Darwin Schools. Staff shortage and the fact that dental rooms in schools have been returned to the Education Branch accounted for this.

Future policy for this branch of the service will be the use of Mobile Surgery Units. School Dental Services will be resumed when the first of these Units arrives.



# NATIONAL FITNESS MOVEMENT

THE ADMINISTRATION of the Commonwealth National Fitness Grant, allocated under the terms of the Commonwealth *National Fitness Act* 1941, is carried out with the Commonwealth providing a central administration and the activities in the States centering around the State National Fitness Councils, the State Departments of Education and one University in each State.

Several important steps relating to the National Fitness Movement were taken during the year. These included—

- (1) A decision by the Commonwealth Government to increase the annual grant to State National Fitness Councils by £27,500 from £36,954 to £64,454.
- (2) Financial sponsorship by the Commonwealth Government of the 3rd British Empire and Commonwealth Conference on Physical Education held in Perth in November, 1962, in conjunction with the Commonwealth Games.
- (3) The acceptance by National Fitness Councils in each State of substantial responsibility in connexion with the introduction and operation in Australia of the Duke of Edinburgh's Award Scheme and a Commonwealth grant of £500 to the scheme from the National Fitness Fund.
- (4) The holding in April, 1963, of the Fifteenth Session of the Commonwealth Council for National Fitness.

## COMMONWEALTH GRANTS

The increase of £27,500 in the annual Commonwealth grant to State National Fitness Councils was made following a review of the movement by the Commonwealth Government. The Government was assisted in its review by the opinions of the Commonwealth Council for National Fitness, which had been asked to indicate the achievements under the scheme and any further requirements to attain the aim of having a fit nation. The review showed that the initial concept and direction of the movement had been sound and that much had been achieved through the setting up of university courses to train specialists in physical education, the fostering of physical education in the schools to lay the foundation of physical fitness in the community and the formation of State National Fitness Councils to assist community participation. It showed also that if the full potential benefit of the scheme was to be gained there was need for increased Commonwealth financial support and leadership for the State National Fitness Councils whose facilities were overtaxed. The

increase in the grants to councils and the display of Commonwealth interest will encourage and enable them, amongst other things, to provide more trained staff and leaders to cope with the increasing demands being made by an expanding population which has more and more leisure time.

## PHYSICAL EDUCATION CONFERENCE

In view of the importance of physical education in the National Fitness Movement, the Commonwealth Government provided £2,438 from the National Fitness Fund to enable a physical education conference to be held in conjunction with the Commonwealth Games in Perth in 1962. The holding of such a conference has become an accepted obligation of the host nation of the games following similar conferences in Vancouver in 1954 and Cardiff in 1958. The conference was organized by the Australian Physical Education Association and was attended by 260 delegates including 21 distinguished overseas physical educators. In addition, some 50 observers attended selected sessions and many Australian and international coaches and athletes assisted with certain activities. There has been praise for both the conduct and content of the conference and it is expected that beneficial effects in the field of physical education will be derived in many Commonwealth countries as well as in Australia.

## DUKE OF EDINBURGH'S AWARDS

National Fitness in Australia will benefit from the activities which will follow the introduction into Australia, on a large scale, of the Duke of Edinburgh Award Scheme. It is fitting that the National Fitness Councils should be closely associated with the scheme which involves a personal challenge to the young participant to attain a certain standard of proficiency in leisure time activities of a purposeful kind. Originated by His Royal Highness the Duke of Edinburgh in 1954 the scheme is intended to assist the development of character and citizenship in young people. Because of its link with National Fitness the Commonwealth Minister for Health approved in May, 1963, a grant of £500 from the National Fitness Fund to assist in the establishment of an Australian office of the Scheme. The Scheme is in no way subject to Governmental control.

## COMMONWEALTH COUNCIL FOR NATIONAL FITNESS

The Fifteenth Session of the Commonwealth Council for National Fitness was held in Sydney by courtesy of the National Fitness Council of New South Wales on 8th and 9th April, 1963. As a result of the recommendations made to the Commonwealth Minister for Health, a realistic approach is being made to the question of providing a training course for national fitness leaders from all States. This may solve, or help to solve, the long-standing problem of shortage of leaders for national fitness work. The Minister also accepted a recommendation of the Council for the amendment of the Commonwealth Financial Schedule which sets out the areas in which the annual Commonwealth grant may be expended. The amended Schedule includes the £27,500 increase in grants to State National Fitness Councils. The increase was made to State Councils and allocated to heads of expenditure in the Schedule in the same proportion as earlier grants had been apportioned.

### FINANCE

With increase in grants to the State National Fitness Councils the Commonwealth Government's appropriation for National fitness activities during the year rose from £72,500 in 1961-62 to £100,000 in 1962-63. This was allocated as follows:—

	£
State National Fitness Councils ..	64,454
State Education Departments ..	17,000
Universities .. ..	12,400
Central Administration ..	3,396
Australian Capital Territory ..	2,750
	<hr/>
	100,000
	<hr/>

### STATE NATIONAL FITNESS COUNCILS

With the aid of the increased Commonwealth grant the State National Fitness Councils in many instances expanded or made plans to expand their

State-wide activities. The activities included the rendering of assistance to youth and amateur sports organizations, conducting camps and in some instances youth hostels, running leadership training courses and rendering assistance in the conduct of holiday play centres and swimming classes and schools.

### STATE EDUCATION DEPARTMENTS

The Commonwealth grant to State Education Departments of £17,000 during the year assisted the provision of special instruction in physical education and bursaries for teachers, the organization of school camps and the provision of materials for book and film libraries and teaching aids.

Details of allocations made to State National Fitness Councils and State Education Departments are given in Tables 31 and 32 on pages 81 and 82.

### UNIVERSITIES

Payment to the Universities from the National Fitness Fund during the year totalled £12,400. The Universities of Melbourne, Queensland, Adelaide and Western Australia received £2,100 each while the Universities of Sydney and Tasmania each received £2,000. Through their courses in physical education the Universities continued to provide physical educationists who were mainly absorbed by the schools.

### AUSTRALIAN CAPITAL TERRITORY

Following recommendations by the Australian Capital Territory National Fitness Advisory Committee the Commonwealth Minister for Health authorized the payment of grants from the National Fitness Fund to youth organizations and amateur sporting bodies in the Australian Capital Territory during the year. Funds were also provided to assist the promotion of physical recreation programmes for young people and the conducting of holiday play centres. The amount of £2,750 was available for these purposes.



# NURSING

UNDER THE AUSPICES of the Colombo Plan Technical Co-operation Scheme, post-graduate training was arranged for 214 nurses and 162 nurses were placed in teaching hospitals for a three-year basic nursing course. This is the first year that post-graduate training has been arranged in Australia for nurses under the Special Commonwealth African Assistance Plan. One nurse sponsored by the Australian International Award Scheme has been placed in a hospital for a four-year basic course.

The number of post-graduate nurses represents the largest group ever to study in Australia in any one year.

As in previous years the Nursing Colleges and Hospital Authorities have played an important part in providing the technical training for nurses under the above schemes.

The table below sets out the number of graduates and undergraduate nurses who have commenced study programmes since 1954—

Graduate Nurses:			
Colombo Plan	..	..	220
World Health Organization	..	..	26
Special Commonwealth African Assistance Plan	..	..	7
Undergraduate Nurses:			
Colombo Plan	..	..	163
Australian International Award Scheme			1

## Wide Range of Specialities

Training has been arranged in a wide range of specialities. Students are attending the variety of formal College courses mentioned in last year's report, as well as two additional courses—Psychiatric Tutor Diploma Course and the Orthopaedic Certificate Course. In all, 32 nurses are undertaking College courses. Eleven nurses are studying organized post-certificate hospital courses in tuberculosis, paediatrics, cancer, and midwifery nursing.

## Basic Nursing Trainees

At present there are 56 nurses from Malaya undergoing a three-year course. Most of these

nurses have completed the first half of their course. Some will complete their training in 1964. The recipient of the International Award comes from Noumea.

## Nominating Countries

The nominating countries under the Colombo Plan and Special Commonwealth African Assistance Plan are Brunei, Burma, Ceylon, India, Indonesia, Malaya, Nigeria, Nyasaland, Pakistan, Philippines, Rhodesia, Singapore and Thailand.

## HOME NURSING SUBSIDY SCHEME

Expenditure during the year on the promotion of the Home Nursing Service was £144,388. These payments are made as a subsidy to assist the expansion of home nursing activities. To be eligible an organization must be non-profit making and must receive assistance from a State Government or local governing body, or other authority established by or under a State Act. It must employ registered nurses. It is provided that Commonwealth subsidy must not exceed the amount of State Assistance received by the organization concerned. Eligible organizations established prior to November, 1956, now receive £1,000 a year in respect of each additional qualified nurse employed, and new organizations established since November, 1956, receive £500 a year in respect of each qualified nurse employed.

The Commonwealth subsidy paid to various district nursing organizations now permits the employment of 192 trained nurses.

# THE COMMONWEALTH HEALTH LABORATORIES

IN 1921, the Commonwealth Health Department initiated the development of the Health Laboratories Division to provide laboratory facilities to assist the country practitioner in the diagnosis and investigation of disease, to assist the detection and prevent the spread of quarantinable disease, should it occur in Australia, and to provide centres for laboratory investigations in the field of Public Health and Preventive Medicine.

The Health Laboratories are located at strategic centres around Australia, namely, Darwin, Alice Springs, Kalgoorlie, Port Pirie, Launceston, Hobart, Bendigo, Albury, Lismore, Tamworth, Toowoomba, Rockhampton, Townsville, Cairns and Canberra.

The functions and activities of the Health Laboratories which provide a diagnostic service are authorized by Section 9 of the *National Health Act* 1953-1962.

In recent years the volume of work performed at the Health Laboratories has continued to increase and the scope of the service has progressively widened with the demand for new procedures and the greater use by the medical profession of laboratory investigations as an aid to diagnosis and prognosis of disease. The laboratories now provide services in Haematology, Histopathology, Serology, Biochemistry and Bacteriology.

This has led to the recruitment and training of a staff of science graduates and medical laboratory technologists as well as medical graduates. The problems of recruiting trained staff have, at times, been difficult and much thought is being given to the possibility of local recruitment and training to the necessary qualification standard in medical laboratory technology at the country centres at which the laboratories are located.

The laboratories work in close association with the Hospitals and Red Cross Blood Transfusion Centres of the areas they serve and are responsible for all blood grouping tests required for emergency blood transfusions and transfusions required for major surgery.

With the advances in medicine, the demands for laboratory tests and investigations are increasing, but the expansion into other fields such as Virology is limited by the lack of availability of trained staff.

The number of pathological examinations and laboratory tests performed at each laboratory during the year was as follows:—

Albury .. ..	49,670
Alice Springs .. ..	13,038
Bendigo .. ..	101,739
Cairns .. ..	118,464
Canberra .. ..	238,950
Darwin .. ..	63,834
Hobart .. ..	52,451
Kalgoorlie .. ..	33,554
Launceston .. ..	58,274
Lismore .. ..	133,399
Port Pirie .. ..	12,408
Rockhampton .. ..	75,911
Tamworth .. ..	76,431
Toowoomba .. ..	159,954
Townsville .. ..	172,166
Total .. ..	<hr/> 1,360,243 <hr/>



# SCHOOL OF PUBLIC HEALTH AND TROPICAL MEDICINE

THE SCHOOL OF PUBLIC HEALTH AND TROPICAL MEDICINE is conducted by the Commonwealth Department of Health in association with the University of Sydney, the academic functions of the institution being under the direction of the University and various training, consultative and professional services being maintained by the Department. The work of the School comprises teaching, investigation and consultation in subjects relating to Public Health, Social and Preventive Medicine, and Tropical Medicine and Hygiene.

The main sections of the School comprise: Public Health and Preventive Medicine, Tropical Medicine and Hygiene, Bacteriology and Pathology, Biochemistry, Occupational Health, Environmental Health, Parasitology, and Entomology. The Child Welfare Section of the Institute of Child Health is located in the School and works in close association with it.

## TEACHING ACTIVITIES

In September, 1962, extramural teaching was extended by the institution of a course of lectures and demonstrations in the recognition and prevention of health hazards in industry for engineers, chemists, members of management, and personnel officers. The course, provided by the Occupational Health Section, was arranged by public advertisement and consisted of a series of two-hour sessions on one afternoon each week for thirteen weeks. Over 200 enrolments were made and the usual attendance was 130 to 150 persons. It is proposed to repeat the course in November, 1963, holding it full-time for one week.

Increasing interest in Industrial Health was also indicated by an attendance of thirteen medical practitioners at the annual Postgraduate Course in Occupational Health. This full-time course was held through three weeks in July-August, 1962.

Post graduate studies were conducted for the Diploma in Public Health and the Diploma in Tropical Medicine and Hygiene. Single subjects were provided for the University diploma courses in Dermatological Medicine, Clinical Pathology, Social Work, and Public Health Dentistry.

For undergraduate studies in fifth year medicine the School of Public Health and Tropical Medicine conducted a course of 50 lectures and practical instruction in Preventive and Social Medicine, while for fourth year students lectures were given in Helminthology. Courses in Protozoology, Hygiene, and Industrial Hygiene and Safety were given to Science, Architecture and Engineering students respectively.

## RESEARCH AND INVESTIGATION

### BACTERIOLOGY AND PATHOLOGY

#### Histopathology of Tumours

The long-term study of neoplasms in the indigenous population of the Territory of Papua and New Guinea, which was commenced by the establishment

of a Papua-New Guinea Tumour Registry in 1957, has been continued. Only material requiring consultant opinion is now received.

#### Medical Mycology

A survey of dermatophytosis in native inhabitants of the British Solomon Islands, in association with Dr. G. E. Hoult of Honiara, has been completed and publication of the results is intended.

#### Leptospirosis in New Guinea

A report on a serological and epidemiological investigation of humans and feral animals of Papua and New Guinea for the presence of leptospiral infection has been prepared for publication.

#### Leptospirosis in Domestic Animals in New South Wales

A final report of a serological investigation of leptospiral infection in domestic animals to define the animal reservoirs of this disease in New South Wales, which was completed in association with Mr. A. J. Keast, Director of the New South Wales Veterinary Research Station, Glenfield, is in the press.

#### Serological Survey of Wild Pigs

A survey of wild pigs for the presence of Q fever, leptospirosis and swine fever infections, conducted in conjunction with the New South Wales Veterinary Research Station, Glenfield, has been completed and a preliminary notice published.

#### Q Fever in Sheep

A serological survey of sheep in New South Wales for the presence of Q fever infection is in progress.

## BIOCHEMISTRY

### Serum Protein Studies

Serum protein examinations of New Guinea natives, as part of a longitudinal study associated with the malaria eradication programme of the Department of Public Health of the Territory of



Papua and New Guinea is nearing completion. Correlation of electrophoretogram quantitation methods in the above and in material from other sources was continued.

### **Cholinesterase Levels in Workers with Organo-Phosphorous Compounds**

Cholinesterase levels in normal persons have been established for age groups by various assay methods, but sufficient information has not yet been obtained on recovery rates following organo-phosphorous compound exposure.

### **Amino-acid Excretion and Serum Bromine Studies**

Studies on the amino-acid excretion of "benign" albuminurics and on the micro-estimation of bromine in serum and tissues were continued.

## **ENTOMOLOGY**

### **Australasian Culicidae**

A check list, including a summary of biological data and keys for identification of all species of Australasian mosquitoes, is in preparation in association with Dr. E. N. Marks of the University of Queensland.

### **Biting Midge (Sandfly) Investigations**

Limited field work, mainly on biting midge ecology, and further consideration of the extensive material and data collected was undertaken. Papers on biting midge taxonomy, the veterinary importance of sandflies as possible vectors of disease in animals, and the influence of the tide cycle on *Culicoides* breeding were published.

### **Malaria Vector in Northern Territory**

Two attempts at proving a malaria vector for the Northern Territory were made in association with the Department of Health, Darwin, and the Parasitology Section. Neither was successful though a useful technique for long-distance co-operation was evolved.

### **Domestic Flies**

An investigation was commenced on unsolved problems, of great Public Health importance, relating to populations of house-flies (*Muscidae*) and blow-flies (*Calliphoridae*), on the assumption that much basic information on the life history, ecology and distribution of these remains unknown, and that advances in fly control will not be made by insecticide technology alone, but by the combination of insecticides and certain biotic data. A total of 35 species of *synanthropic diptera* have been trapped in the Central Sydney area and form the basis of a reference collection for this project, and an ovarian technique for the age estimation of blow-flies developed. This project will be a closer and more detailed study than has been previously attempted.

## **ENVIRONMENTAL HEALTH**

### **Antarctic Physiology**

A field study of human acclimatization to cold was undertaken by Dr. G. M. Budd on Heard Island between January and March, 1963. Dr. Budd, as leader of the party of six, was also concerned in the organization and execution of the general research programme of the project. Experiments were conducted to determine whether acclimatization to cold occurred during the brief but intensive exposure of the party to wet-cold conditions on the Island. One study included a 2-hour exposure to a temperature of 38° F. in the ship's cold-room, both before arrival at Heard Island and immediately after re-embarkation. The results are in process of analysis.

### **Thermal Comfort**

Studies in thermal comfort in Australia are proceeding and a further paper on this subject is in the press.

### **Radiant Cooling**

Experiments on the physiological effectiveness of radiant cooling, undertaken in co-operation with the Engineering Section of C.S.I.R.O., has been temporarily suspended pending completion of the investigation of certain engineering aspects of the work.

## **OCCUPATIONAL HEALTH**

### **Health of Telegraphists**

The second phase of the prospective health survey of telegraphists (comprehensive medical interview and examination) was commenced in April, 1963, following a detailed analysis of sickness and absence records of the Postmaster-General's Department. Some aspects of the working environment were also studied.

### **Exposure to Ink and Paper Dusts in Printing Departments**

A study of the effect of such exposure was commenced by the medical examination of a group of employees in the industry, together with some environmental observations.

### **Sandblasting of Ships**

A survey is proceeding on dust production during the sandblasting of ships at a naval dockyard. Atmospheric sampling was undertaken and further environmental studies and medical examination of persons exposed to dust, with a view to determining if there is a silicosis hazard, is projected.

## **PARASITOLOGY**

### **Filariasis in New Guinea**

Studies on the epidemiology and control of filariasis in New Guinea natives, conducted in association with the Department of Public Health of



the Territory of Papua and New Guinea and now in their fourth year, were continued. The project was designed to select a routine method for control of the disease, suitable for general use in the Territory.

Blood films collected in October, 1962, in the Rai Coast (Finschhafen Sub-District) control area, where three courses of diethylcarbamazine, the drug under trial for controlling the disease, had previously been given, showed a very marked reduction in the microfilaria rate and density. The drug will now be withheld until these indices begin to rise.

In the Wengei area of the Sepik, where residual insecticidal control of mosquitoes had previously been instituted, yearly observations are being made to determine whether insecticidal spraying alone will influence filarial transmission.

In Manus an experiment on the efficacy of a combination of drug treatment and mosquito control is proceeding.

#### **Miscellaneous Parasites**

Study of blood and alimentary parasites of reptiles and marsupials was continued, including new species of *Trypanosoma* and *Leishmania* from lizards.

#### **PREVENTIVE MEDICINE**

##### **B.C.G. in Leprosy Prevention**

An investigation was planned in association with the Department of Public Health of the Territory of Papua and New Guinea to evaluate the efficacy of B.C.G. inoculation as a prophylactic against leprosy. After preliminary anthropological studies, the entire population of the Karamui area was surveyed for leprosy in October, 1962. In March, 1963, the population was Mantoux tested and randomly allocated to provide experimental (B.C.G. receptor) and control (saline receptor) groups. Follow-up surveys will be carried out at half-yearly intervals to include newborn and immigrants in the study population. From data so far available, it is evident that Karamui presents a unique opportunity for this trial, in that there is a high incidence of leprosy, up to 20 per cent. in some villages, and a virtual absence of tuberculosis infection.

##### **Breast Cancer**

An epidemiological study of 674 cases of breast cancer, registered at St. Vincent's Hospital, Sydney, between 1954 and 1961, undertaken in co-operation with Dr. L. Atkinson and Dr. J. Fleming, of St. Vincent's Hospital, is in progress.

##### **Medical Care**

Studies of medical education and care, including evaluation of performance, methods of continuing

medical education, analysis of data on Australian general practice and requirements in medical manpower are in progress.

#### **RADIOBIOLOGY**

##### **Radio-leukaemia**

Final scoring of chromosome aberrations in the series of irradiated mice, examined in the pre-leukaemic phase, has been completed. An account of this work, which has been reported in the past two years, was presented to the Conference on the Late Effects of Ionising Radiations, in London, 1963. From this study it is clear that chromosome anomalies present in radio-leukaemia appear also in the thymus in the preleukaemic phase and before the onset of malignancy, as judged by the inability of the preleukaemic cells to transplant.

#### **TROPICAL MEDICINE**

##### **Relapsing Vivax Malaria**

Investigation of the effect of Primaquine, used clinically for the eradication of relapsing vivax malaria of New Guinea origin, was continued. A trial of a new course of treatment, extending over a period of eight weeks, was commenced in 45 students at the Australian School of Pacific Administration. These officers have been exposed to malaria in New Guinea and will remain in Sydney till the end of 1963, when results will be available for comparison with other viruses used in past years.

##### **British Solomon Islands Field Studies**

Reports have been published on field work carried out on the health of plantation workers in the British Solomon Islands Protectorate and further papers are in preparation.

#### **CONSULTATIVE AND ADVISORY SERVICES**

Consultative services provided by the sections of the School in their particular subjects were widely used by Departmental institutions and by various Commonwealth and State departments, institutions and public authorities. Honorary consultant physicians' posts to various hospitals were also held by staff members.

Consultative assistance was afforded to a number of Commonwealth departments, including the Departments of Territories, Works, Postmaster-General, Civil Aviation and External Affairs. Requests for advice were also received from Territory Administrations.

Association was maintained with a wide range of health agencies, and professional, educational and community bodies. The Department and the School were widely represented on such bodies, often by the personal membership of staff members.



# INSTITUTE OF CHILD HEALTH

THE INSTITUTE OF CHILD HEALTH is located partly in the School of Public Health and Tropical Medicine in the grounds of the University of Sydney, and partly at the Royal Alexandra Hospital for Children.

The Staff of the Institute conduct research and also co-operate in both undergraduate and postgraduate teaching, this co-operation being facilitated by the fact that the Director of the Institute is also Professor of Child Health in the University of Sydney.

An appointment to the post of Psychiatrist to the Institute of Child Health was postponed as the Director-General of Health and the University of Sydney agreed to this position being made a joint appointment between the Commonwealth Department of Health and the University, the appointee to have the title of Associate Professor of Child Psychiatry in the Departments of Child Health and Psychiatry in the University of Sydney. It is believed that this will be the first appointment of a professor or associate professor of child psychiatry in the British Commonwealth.

In 1962 the Director attended the 10th International Congress of Paediatrics held in Lisbon, where he was joint president of the section of nephrology, and the Annual Meeting of the European Club for Paediatric Research held in Barcelona. He also accepted invitations to be Visiting Lecturer at the Princess Margaret Hospital for Children, Perth, Western Australia, and to give a University Lecture in Helsinki, Finland. Addresses were given at a number of medical meetings and a meeting was convened to discuss problems associated with babies born deformed as a result of their mothers having taken thalidomide during pregnancy and recommendations were made jointly with the Secretary of the Australian Paediatric Association to the National Health and Medical Research Council.

The Department made the services of Dr. F. W. Clements available for the three months, August to October, 1962, to the World Health Organization to assist in the planning and conduct of an International Seminar on Nutrition. This seminar, sponsored jointly by F.A.O., W.H.O. and U.N.I.C.E.F., was held in Hyderabad, India. Most of the time, Dr. Clements was located at the Regional Office of W.H.O. Delhi, but during the preparation of the seminar, he had the opportunity to visit medical, teaching and research institutions in several parts of India and re-acquaint himself with the problems of nutrition and health and nutrition education in India.

## RESEARCH

### RHEUMATIC FEVER

Oral penicillin prophylaxis continues to be given to every child admitted to the study when a diagnosis of acute rheumatic fever or chorea has been con-

firmed. Since the survey commenced in 1952, 219 children have been included in this group, but nineteen of these have been lost from the study for a variety of reasons including two deaths. The effectiveness of penicillin in preventing recurrence of rheumatic fever is confirmed. The observations being made of social, emotional, and adjustment problems relating to those patients who have reached adolescence are continuing. The children in the control group are seen bi-annually, and home visits were paid to mothers of all new patients admitted to the Royal Alexandra Hospital for Children, under the care of the Institute of Child Health, for treatment of rheumatic fever. Follow-up contact has been made with families who failed to attend the Clinic.

### HYPOTHYROIDISM

The study of congenital, non-goitrous hypothyroidism now includes ten infants and children, of average age 29 months with a range of 14 to 82 months. The principal criteria of progress being used are measurements of height, span, weight, head circumference and developmental quotient based on the Mary Sheridan Scale. An initial assessment of osseous age, serum cholesterol and protein bound iodine concentration in the serum is made, the latter investigation being repeated at intervals to check the clinical progress as estimated by the other parameters mentioned. The Unit Social Worker keeps in constant contact with each patient at each monthly clinic visit. It is hoped to attempt assessment of the mental age of these patients as each reaches his fourth year. The study of antithyroid antibodies in these children, their mothers and siblings is being continued. The method used is a modified tanned sheep cell agglutination technique.

### ENDEMIC GOITRE

The studies in endemic goitre in southern Tasmania were continued in 1962-63. During the the second half of 1961 prophylactic and therapeutic trials with thyroxine were carried out on 182 children. With a small group of 38 attending schools along the D'Entrecasteaux Channel the purpose of the trials was to prevent the seasonal enlargement of the thyroid which had been observed to occur in these children in the preceding years. This trial



showed the thyroxine to be only partially effective. The therapeutic trials were made on 128 boys and girls who had had a persistent goitre for a number of years. In approximately two-thirds of these children the goitre was significantly reduced, confirming the value of thyroxine as therapeutic agent for endemic goitre. A paper has been prepared for publication.

Continued assistance was given to Dr. Hennessy of the School of Public Health and Tropical Medicine in respect of a goitre survey he made in New Guinea and plans have been prepared for an extension of this study by field workers under the general direction of Dr. Clements.

#### **URINARY TRACT INFECTIONS**

The long-term follow-up of children with urinary tract infections has been continued and the effectiveness of continual chemotherapy in children with chronic urinary tract infections was further confirmed. The frequent finding of vesico-ureteric reflux on cystography in children with chronic urinary infections gave rise to further speculation concerning its significance in the role of cause or effect of infection, a study which is being reflected increasingly in the literature on this subject. The use of the image-intensifier of the Royal Alexandra Hospital for Children in the radiological investigation of these children has been of considerable help in arriving at a more precise anatomical and functional diagnosis.

#### **ACCIDENTAL POISONING IN CHILDREN**

The collection of information from coroners' depositions in New South Wales about the circumstances surrounding the deaths in 1960 and 1961 of children under five years of age, who had swallowed a poison, completed the New South Wales data for the Australia-wide survey which has been organized by the Institute to endeavour to find an explanation for the apparent high death rate from acute poisoning in children in Australia compared with the United States of America and the United Kingdom. Information for other States, collected by doctors living there, is being collated by Dr. Clements.

#### **THALASSAEMIA STUDY**

Investigations were carried out in 1962-63 of possible needs of migrant families who have children with thalassaemia, and ways that such needs might be met.

#### **SCURVY**

A paper on "Scurvy: A Problem of Health Education" was submitted for publication. This paper

reports an investigation made into the social background of families of children admitted to the Royal Alexandra Hospital for Children with a diagnosis of scurvy between mid-September, 1959, and August, 1961. The purpose of the study was to obtain information as to why these children had not been given ascorbic acid.

#### **INSTITUTIONAL CARE OF CHILDREN**

The study into various aspects of care of infants and small children in an institution was completed in the year under review and a report submitted to the committee of the institution concerned and to the Department of Child Welfare. The School of Social Work at the University of Sydney co-operated in this study.

#### **CARDIAC SURGERY**

Additional minor modifications made to the Ebsray R.A.H.C. Heart-Lung Machine further improved its performance and range of usefulness and work on the treatment of congenital cardiac malformations continued.

#### **CHROMOSOME STUDIES**

Chromosome studies were conducted during the year with the help of Dr. Brian Turner in the Neuropathology Laboratory, North Ryde Psychiatric Centre, New South Wales Department of Public Health. Cases of potential chromosomal interest referred from the Royal Alexandra Hospital for Children, the Women's Hospital, Crown-street, and from practising paediatricians were investigated. From these studies, publications on the XXXXY Syndrome, 21 Trisomy and 18 Trisomy in a sibship, Translocation mongolism and An autosomal ring chromosome, are in the course of preparation.

#### **PARENT EDUCATION**

Data from recently completed research studies have been analysed and three papers are being prepared for publication. The first examines the effectiveness of the group discussion method in reducing accidents among the children of young parents. The second examines the determinants of participation in child-rearing courses gleaned from test and interview data on 96 mothers in a Sydney suburb. The third paper, addressed to the problem of reducing human factors in children's accidents, examines accident causation, factors underlying parental failure in keeping their children accident-free and the theoretical basis of a suggested community programme.



# THE NATIONAL BIOLOGICAL STANDARDS LABORATORY

THE NATIONAL BIOLOGICAL STANDARDS Laboratory was established in 1958 under the provisions of the Therapeutic Substances Regulations.

Soon after his appointment in June, 1958, the Director was granted a World Health Organization Fellowship. Under this Fellowship he visited Biological Standards Laboratories in the United States of America, Canada, and the United Kingdom and on his return to Australia a small staff was recruited and a Laboratory established in temporary quarters in the Australian Institute of Anatomy.

The development of the Laboratory has necessitated diversification and at the present time it is spread over five different localities, four of them in Canberra and one in Melbourne.

Broadly, the Laboratory is responsible for the following functions:—

- (a) to ensure that therapeutic substances used for the prevention, diagnosis and treatment of disease in man and animals are safe, pure and potent;
- (b) to ascertain by analysis or other means whether therapeutic substances conform to standards where such standards exist;
- (c) to draw up standards for therapeutic substances for consideration by the appropriate Committee, where no standards exist; and
- (d) recommend through the appropriate Committee, modification of existing standards where they are unsuitable to Australian conditions.

In addition to the established practice of examining new therapeutic agents recommended by the Pharmaceutical Benefits Advisory Committee for inclusion in the list of pharmaceutical benefits, applications for listing of new brands of existing benefits will also be subject to a sample of the product meeting a satisfactory standard upon assay by the Laboratory. This will provide an additional safeguard of public funds spent on pharmaceutical benefits and ensure that the public receives medicines of a satisfactory standard.

Work on the drafting of standards, where such do not exist, or for the modification of existing standards has continued over the year and has reached a stage where certain of these are ready for consideration by the appropriate Committee. Pressure of routine assays has limited the work carried out on this most important function. Recruitment of senior staff to commence duty in the coming year should allow time for the necessary research projects to increase the tempo of this activity of the Laboratory.

Liaison has continued with the Pharmaceutical Industry to the mutual advantage of both parties.

The National Biological Standards Laboratory is divided into two broad disciplines—the Biological Products Division and the Pharmaceutical Products

Division. The Biological Products Division is divided into four working laboratories, namely, Bacterial Products, Viral Products, Endocrine Products and Antibiotics. The Pharmaceutical Products Division consists of Pharmaceutical Chemistry and Pharmacology laboratories.

## BIOLOGICAL PRODUCTS DIVISION

### Bacterial Products Section

This Section has not yet commenced to function because of the inability to recruit staff. However, a suitably qualified and experienced biochemist will soon take up duty and negotiations are proceeding to procure the services of other staff. In the meantime, routine sterility testing is being carried out in the Antibiotics Section.

### Viral Products Section

This Section moved to quarters in Parkville, Victoria, in August, 1962, and in January, 1963, assumed responsibility for the independent testing of Salk Vaccine, previously performed by the Fairfield Infectious Diseases Hospital. More recently the Laboratory has commenced testing Salk Vaccine for Simian virus 40.

A number of problems which had led to difficulties in the effective testing of vaccines are being studied in detail and have been largely overcome. The central problem was that of poliovirus inhibitors which occur in the animal sera and are best able to ensure prolonged survival of the cell cultures used in safety tests. Since similar problems are likely to be encountered in tests applied to other types of viral vaccines, studies on virus inhibitors are being continued.

The laboratory has continued its studies of infectious laryngotracheitis vaccines, some aspects of these studies being carried out in collaboration with the New South Wales Department of Agriculture. Testing of vaccines of this type which are marketed in this country have shown them to meet potency requirements.



*Publication:* D. W. Howes, G. A. Tannock and B. Sinkovic (1962)—“The Assessment of a potency standard for infectious laryngotracheitis vaccine in dose-response experiments”. 12th World's Poultry Congress, pp. 339-348.

### **Endocrine Products Section**

The principal task of the Endocrine Products Section has been insulin sampling. Over the year insulin products of every manufacturer represented in Australia were sampled. The only failures in assay were of a minor nature and generally speaking the products available are of a high standard.

A sensitive assay which is suitable for automation has been developed in this Section for Heparin. All available brands of Heparin were sampled and all but one failure were of a minor nature. The one major failure was a product found to be grossly below strength.

Staff are at present being trained with a view to testing corticotrophins and gonadotrophins.

Members of the Section are on the Committee for Insulin Syringes of the Standards Association of Australia.

### **Antibiotics Section**

Of 300 samples collected under the programme 126 failed in some way or another to meet standards. Serious faults in human antibiotics were not common, but, in the testing of veterinary products, the results were not nearly so satisfactory and negotiations are being carried out with manufacturers in an endeavour to raise the standard of these products.

Surveillance of imported antibiotics both for human and veterinary use was intensified during the year.

Activities which are now increasing in importance are the certification of exports, testing of products under tender for Commonwealth Departments or for hospitals and the testing of products recommended for inclusion on the list of Pharmaceutical Benefits.

## **PHARMACEUTICAL PRODUCTS DIVISION**

### **Pharmaceutical Chemistry**

This Section examined 675 samples during the year including 120 samples of items proposed for listing as Pharmaceutical Benefits. The failure rate was 30.7 per cent. of all samples examined, 43.5 per cent. of failures being of a major nature and the remainder deficiencies in labelling,

colouring, &c., which would not affect the efficacy of the product. In addition, a further 90 samples were examined for Commonwealth and State Departments.

The appointment of a Consultant from overseas, who should take up duty in the near future, will strengthen the Section and enable more research work to be undertaken, particularly in relation to proposed standards.

Proposed standards were drafted for eighteen radioactive pharmaceutical preparations, eight chloramphenicol preparations, and for morphine base.

A collaborative study of the stability of aspirin under the various climatic conditions experienced in Australia has been carried on during the year and it is hoped to publish the results at an early date.

Members of the Section participated in the ANZAAS meeting in August, 1962, and presented two papers. One of these papers, dealing with analytical problems with eye drops, was subsequently published in the *Australian Journal of Pharmacy*.

The officer-in-charge accepted an invitation from the Australian Pharmaceutical Science Association to sit on a Committee to critically examine all aspects of B.P. products.

### **Pharmacology Section**

This Section, whose function it is to test various products by administering them to animals and observing and reporting on the reactions produced, has performed many tests in conjunction with the other Sections of the Laboratory and also carried out independent assays and investigations on its own behalf.

During the year 679 pyrogen tests were performed and only two preparations failed to meet approved standards.

A variety of other tests were performed on laboratory animals to estimate toxicity, pathogenicity, &c., and other products were tested against approved standards.

Investigations were commenced into problems associated with particulate matter found in intravenous solutions. The aim of the investigation is to obtain experimental evidence on the deleterious effect of this particulate matter and to draft a suitable standard for intravenous solutions in this respect. This will involve an extensive application of histological techniques and steps have been taken to purchase suitable histological equipment and to train staff for this task.



# COMMONWEALTH ACOUSTIC LABORATORIES

THE COMMONWEALTH ACOUSTIC LABORATORIES began as a section of the Commonwealth Department of Health on 1st January, 1947. The Laboratories had previously functioned under the auspices of the National Health and Medical Research Council, but demands for services, particularly in regard to National Health Schemes, and for the Defence Forces, made it desirable that the Laboratories become a part of the Department of Health.

The research functions were continued and extended under authority given in the *Acoustic Laboratories Act* 1958.

## SERVICES

The major services are the testing of hearing and the provision and maintenance of hearing aids.

### TESTS FOR DIAGNOSIS AND PROGNOSIS

These tests have proved useful for diagnosis for medical and surgical treatment and for educational placement and for prognosis in regard to the use of hearing aids. Tests are also made of new Commonwealth employees suspected of hearing defects and of cases in the Armed Services and Commonwealth Departments and organizations claiming compensation for hearing loss caused by noise.

During 1962-63 there were 3,047 Repatriation, 3,639 children, 977 miscellaneous, 22 Social Service, 204 Army, 327 R.A.A.F., 139 Navy, 278 Commonwealth employees and 163 Commonwealth compensation cases, the total number of cases being 8,796.

In addition hearing tests are required under International Civil Aviation Organization regulations for all civilian aircrew. These are carried out about every six months at the Laboratories, the number of cases in 1962-63 being 2,521.

### HEARING AIDS

A major service is the design, procurement, fitting and maintenance of hearing aids issued to partially deaf children, adolescents, Repatriation cases including Service pensioners, military service personnel and Commonwealth Social Service rehabilitation cases.

During 1962-63 there were 2,264 cases fitted with Calaid hearing aids, bringing the cumulative total of fittings to 18,682. Of these, 11,725 were Repatriation, 6,591 children, 115 Social Service, 183 adolescent, and 68 military service cases.

### HEARING CONSERVATION

Small portable battery audiometers provided by the Acoustic Laboratories are used by School Medical Services, the Armed Services medical services, and industrial medical services to screen for possible deafness those cases found most susceptible to hearing loss. The number of audiometers at

present in use is 58 for the School Health Services, 17 for Commonwealth Departments and organizations, 12 in industry, 14 for the R.A.A.F., 8 for the Army and 2 for the Navy, making a total of 111.

The latest Acoustic Laboratories development of individually moulded silicone rubber ear protection has enabled a very efficient, comfortable and acceptable ear protection, and this method is now being extensively exploited in the Armed Forces and in industry by Acoustic Laboratories staff.

Conservation work will be helped by the adoption at the annual meeting of the Oto-Rhino-Laryngological Society of Australia in May, 1963, of recommended standard use by all ear, nose and throat specialists of the Commonwealth Acoustic Laboratories Hearing Impairment Table (1958) for calculating percentage hearing impairment.

### RECRUITING CENTRES

During the year official testing of all recruits began in the Armed Forces Combined Recruiting Centres in special testing booths recommended by the Laboratories, with audiometers provided by the Acoustic Laboratories.

These tests, which provide a base on which any future personal deterioration can be measured, enable a selection of personnel for special categories where hearing is required to be within certain close limits, and the placement of recruits with small degrees of hearing loss.

## RESEARCH

### ACOUSTICS AND ELECTROACOUSTICS SECTION

Major investigations in the development of equipment for the measurement of blast and shock waves and impact noises in the Armed Services and in industry have been made. These noises are particularly difficult to measure mainly because of their transient effect. Before the effect of such noises on personnel can be adequately investigated, the parameters of these noises which are most likely to affect personnel have to be determined and measured. Of particular importance are the sonic boom effects which will shortly be experienced with the advent



of supersonic aircraft in the R.A.A.F., which will be followed by supersonic civilian aircraft in a few years.

A comprehensive report on Ear Protectors, C.A.L. No. 21, has recently been published. A new silicone rubber (silastic) individually moulded earplug has been developed and, as this plug gives good protection with maximum comfort, it is found most acceptable. Extensive programmes are now being pushed for the use of this plug in connexion with the hearing conservation programmes.

Investigations particularly concerned with efficient mounting for head-mounted aids and automatic volume control are being made into hearing aids.

Apparatus for the production of impulse sounds of varying rise time were produced for experimental work on deafness and loudness of such sounds and C.A.L. Informal Report No. 29, "Some Equipment Developed for the Study of Temporary Threshold Shift Caused by Impulse Noise", issued.

#### PSYCHOLOGY AND AUDIOLOGY SECTION

The major investigations have been along the lines of blast and impact noises and their effect on personnel. Field investigations included measurement of the effect of impact noise on permanent hearing loss, and investigations in conjunction with the Department of Mines, New South Wales, endeavouring to find the subjective effects such as annoyance, disturbance of sleep, or general effects on health.

Laboratory investigations were on the relative loudness of impact sounds of different physical characteristics.

A report on "Studies of Temporary Threshold Shift Caused by High Intensity Transients", Bolt Beranek and Newman Inc. Report No. 949, was completed.

#### MEDICAL ULTRASONICS

In August, 1962, Mr. G. Kossoff, Senior Physicist in charge of this section, returned from a visit to the United States of America and Europe, including a special visit to Moscow at the time of the World Cancer Congress, to investigate particularly Russian work on the treatment of skin cancer. This visit also obtained knowledge and contacts which will greatly facilitate future research.

Major developments during the year included the development of apparatus for the cure of vestibular symptoms in Meniere's disease. The development of a transistorized ultrasonic generator and a new type of ultrasonic probe for applying the ultrasonics was completed. At 30th June, 1963, this apparatus was having clinical trials and as it was considered ahead of any overseas apparatus, requests were made for the loan or purchase of similar apparatus from the United States of America and Europe.

An abdominal echoscope, previously installed at the Royal Hospital for Women for the examination of the contents of the pregnant uterus, was further refined to give greater significant clinical results. It is considered that the new pictures obtained will be in advance of any others obtained elsewhere. Requests have been made in the United States of America and Europe for information and assistance in the building of a machine at the level of this present echoscope. Investigations into methods which will extend further the precision of this instrument are being carried out.

An ultrasonic echoscope for the examination of the eye for disease or damage (such as retro-orbital tumours and detached retinas) not capable of being investigated visually has been developed. This apparatus has been set up in the Laboratory and clinical use is now being made on cases forwarded from ophthalmologists. A paper was given by the visiting ophthalmologist, Dr. H. H. Hughes, at the annual meeting of the Ophthalmological Society of Australia.

An ultrasonic neuroscope for localizing the shift of the midline echo and visualization of the ventricles was developed and will undergo research trials. It will be installed in the Royal Alexandra Hospital for Children and used in conjunction with Dr. L. Rail, Honorary Neurosurgeon.

An ultrasonic echoscope for breast cancer detection is in the final stages of development and will be set up in the Royal North Shore Hospital. Clinical trials are expected to begin later this year.

An ultrasonic echoscope is in the preliminary stages of development for the diagnosis of degenerative pulpitis. This is to be used in conjunction with Professor N. D. Martin, Professor of Dentistry, at the Dental Hospital.

#### OVERSEAS INVESTIGATIONS

The Director attended the Fourth International Congress on Acoustics at Copenhagen, 21st-28th August, 1962, the International Congress on Audiology at Leiden, September, 1962, the International Standards Organization Technical Committee No. 43, Acoustics, meeting at Baden Baden, and the International Electrotechnical Commission, Technical Committee No. 29, Acoustics, at Baden Baden, September, 1962. The latter two conferences were of particular importance to the work of the laboratories.

The Director also attended research and other organizations in Europe and the United States of America. In particular, discussions took place with the Secretary of the United States of America National Research Council Committee on Hearing and Bioacoustics.

# COMMONWEALTH X-RAY AND RADIUM LABORATORY

THE LABORATORY was established, as the Commonwealth Radium Laboratory, in 1929 and has since that time served as a national centre for radiological physics.

The functions of the Laboratory were extended to include the physical aspects of X-ray therapy in 1935, when it became The Commonwealth X-Ray and Radium Laboratory, and of X-ray diagnosis in 1939. In 1946 the Laboratory imported the first artificially-produced radioactive isotopes used in Australia and established a system for the procurement and distribution of these substances.

In 1961 facilities were established for radiochemistry and for the measurement of radioactive materials in foods and in various biological samples. Concurrently with these functions the Laboratory provides assistance in matters relating to protection against ionizing radiations and operates an extensive film-badge service to monitor the radiation exposure of those who work with such radiations.

## RADIUM

Radium in the form of needles, tubes and plates is made available on loan to approved hospitals, subject to an agreement between the Department and the management of the hospital concerned, and Commonwealth radium is on loan to centres as distant as Fiji.

As part of a programme of replacing Commonwealth-owned radium plates (at present on loan to public hospitals in the various States) with strontium-90 plates, eighteen strontium-90 plates have been purchased and will be issued after appropriate tests and measurements have been made on them.

## RADON

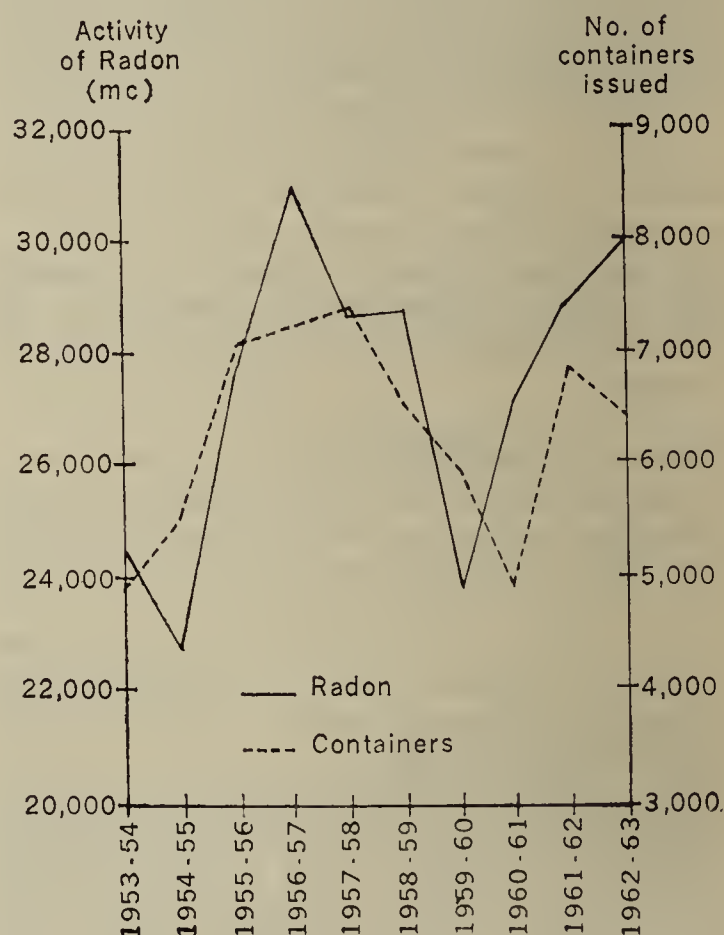
At the present time artificial radio-isotopes such as cobalt-60 have largely replaced radon and in the year no radon was issued by the Laboratory for industrial radiography.

The total activity of the radon issued by the Laboratory in the year for medical purposes in the form of needles, gynaecological tubes and capillary for implantation or construction of surface moulds was 30,253 millicuries, of which 22,345 millicuries were issued to hospitals and 7,905 millicuries to approved private practitioners. The corresponding figures for the year 1961-62 were 28,906, 22,989 and 5,917 millicuries respectively. The Laboratory constructs all gold tubing used in the various radon services in Australia and in the Dominion X-ray and Radium Laboratory, Christchurch, New Zealand. During the year approximately 1,171 feet of gold tubing of all types were constructed—a decrease of approximately 13 per cent. over the previous year.

## RADIATION DOSIMETRY

In the year under review the radiation output and associated characteristics of nine deep-therapy X-ray units and 22 superficial-therapy X-ray units

Activity of Radon and the  
Number of Containers Issued  
for Treatment Purposes only





were assessed and reported on and eight dosimeters were calibrated for diagnostic quality. Investigations of radiation dose to patients have been continued in association with the Medical Radiation Committee of the National Health and Medical Research Council. Appropriate measurements were made on five installations.

During the year two X-ray units were installed at the Laboratory to enable a wider range of dosimetric studies to be made using X-rays generated between 40 KVP and 220 KVP.

Thirteen samples of biological material have been irradiated under controlled conditions for the Department of Zoology, University of Melbourne, as part of a continuing research programme in that Department.

The Laboratory maintains equipment for the dosimetry of beta rays emitted by plane medical applicators. Only one applicator, containing strontium-90, was measured during the year, but, in view of the programme of replacing Commonwealth radium plates by those containing strontium-90, work in this field will increase.

#### **DIAGNOSTIC X-RAYS**

By arrangement with the Australian College of Dentistry, an encephalometer unit is maintained at the Laboratory. This device is so designed that posterior-anterior and lateral radiographs of the skull, taken at intervals over a period of years, may later be superimposed accurately, enabling investigations to be made of the growth of facial bones. The Laboratory has continued to co-operate with the Department of Anatomy in the University of Melbourne in such a project and during the year 272 patients were radiographed. The encephalometer is available by arrangement to orthodontists in private practice and 202 patients were examined in the year.

#### **RADIO-ISOTOPEs**

As part of an arrangement between the Department and the Australian Atomic Energy Commission, the Department, through this Laboratory, is informed by the Australian Atomic Energy Commission of all orders for radio-isotopes received by the Commission. These orders are filled by the Commission only after receiving a "Clearance" from the Laboratory indicating that it does not object to the supply of the material for the stated purpose. During the year ended 30th June, 1963, 648 such "Clearances" were issued. Information about the materials covered by these clearances is set out in Table 36 on page 85.

In the twelve months ended 30th June, 1963, 1,329 shipments, including 28 different isotopes and a large number of compounds, were procured

and distributed by the Laboratory. Of these, 68 shipments including five different isotopes were received from the Australian Atomic Energy Commission. Statistical data on the isotopes procured and issued, and on their field of application, have been collected in Tables 33-35 on pages 82-85.

Table 34 on page 84 shows the quantities of radio-isotopes issued during the year by the Laboratory for medical use in therapy and diagnosis. The Committee on Radio-Isotopes of the National Health and Medical Research Council co-ordinates medical use of radio-isotopes in Australia and administration of radio-isotopes to patients is subject to the approval of this Committee. The Laboratory functions in close association with the Committee.

Radio-isotopes required for medical purposes are, in general, obtained in bulk supplies, most of which are dispensed at the Laboratory into smaller amounts before distribution for diagnostic or therapeutic use on particular patients at specified times. In the year, 14,327 such issues were made. This represents an increase of 28 per cent. over the corresponding number 11,227 for the previous year. Under section 100 of the National Health Act these radio-isotopes, with the exception of yttrium-90 and gold-198 grains, were made available free of charge to all classes of patients.

In addition to the radio-isotopes procured specifically for medical purposes, occasional issues of radio-isotopes for research purposes have been made at cost from bulk supplies imported primarily for medical use. Details of these issues are shown in Table 35 on page 85. This procedure has enabled groups requiring these materials for research to obtain them at a lower cost and with less delay than would have been occasioned by specific importations on their behalf.

#### **RADIOLOGICAL PROTECTION**

During the year specifications of the requirements for adequate protection against ionizing radiation were prepared for nine medical X-ray departments, and for two industrial and one research establishments.

The Laboratory is frequently called upon to assess the adequacy of the protection provided in various installations and to evaluate the safety procedures in use. In the year under review, 51 such investigations were made (of 27 medical X-ray departments, two dental X-ray units, nine industrial and thirteen research installations).

Seven radiation monitors of various types were calibrated during the year.

The Laboratory has given advice and assistance to centres wishing to dispose of radioactive waste material, the methods used depending on the nature of the material and its activity.

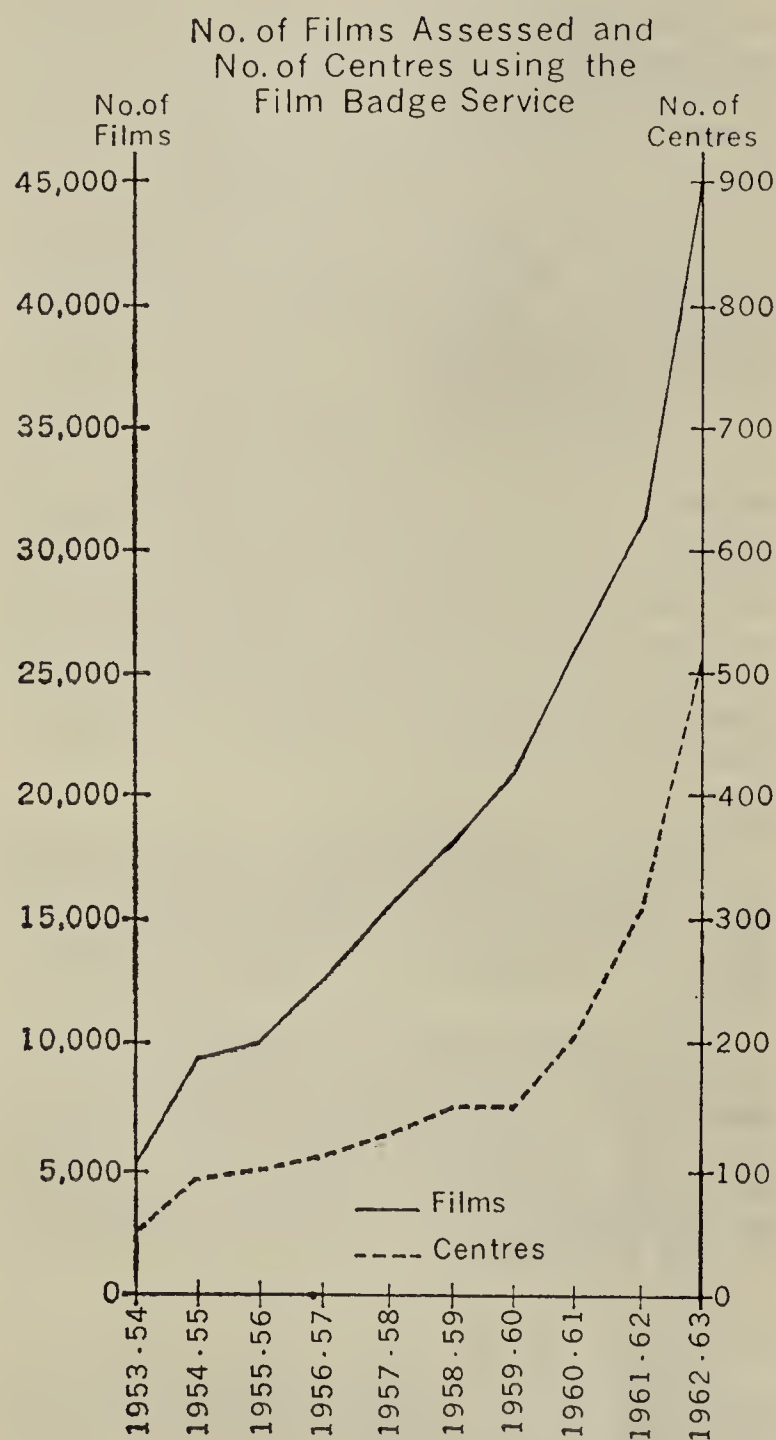


At the request of the Department of Shipping and Transport the Laboratory has arranged for the inspection and monitoring of cargoes of radioactive materials being transported by sea. Seven such cargoes have been inspected.

The Laboratory has recently agreed to undertake the measurement of "microwave" radiation with a view to assessing the safety of workers who may be exposed to it.

#### FILM-BADGE SERVICE

The number of institutions registered in the film-badge service rose from 312 at the beginning of the year to 524 at the end of the year. Of these 483 are making full-time use of the service,



eleven use the service at irregular intervals, due to the nature of the work done, and the remainder have discontinued the use of film-badges.

The number of films assessed during the year was 46,370 compared with 31,118 in the previous year.

#### RADIOCHEMICAL AND LOW-LEVEL MEASUREMENT FACILITY

During the year the Laboratory analysed 62 samples of ashed human bone tissue for strontium-90 and carried out strontium-90 determinations on 77 samples of public water supplies which were obtained quarterly from various parts of Australia and New Guinea. Of these latter samples, sixteen were also analysed for caesium-137. As from the beginning of 1963, measurements have been made on the caesium-137 content of representative monthly samples of milk from each of the Capital cities in Australia. So far, 22 duplicated samples have been measured.

With the resumption of nuclear weapon testing in the Pacific at the end of April, 1962, it was decided as a special project to measure the concentration of iodine-131, which might arise from fall-out, in fresh whole milk from eight major population centres throughout Australia. Daily samples of fresh milk representative of the consumption in each area have been received from the eight centres. For a period, two consecutive daily samples from each centre were compounded for each chemical analysis and radio-assay. Subsequently measurements were made on samples obtained by compounding the daily samples for a week. In all, about 800 samples were received and about 450 separate chemical analyses and radio-assays were made in the sampling period.

In addition to these activities the Laboratory has provided assistance to the Australian Atomic Weapons Tests Safety Committee by analysing samples collected by the Committee in its Australia-wide programme of monitoring fall-out from the testing of atomic weapons.

#### GENERAL

The Laboratory has for many years been associated with the Colombo Plan. Under this Plan equipment is supplied to countries of South-East Asia and people from those countries receive training in Australia. Under the Colombo Plan Training Scheme, the Laboratory has been responsible for placing trainee radiographers in the X-ray Diagnostic and Radiotherapy departments of a number of hospitals. The progress of these trainees has been observed by the Laboratory and special assistance provided where necessary.

A number of lectures was given during the year by members of staff of the Laboratory to the College of Radiologists, the Australian Radiation



Society (Victorian Branch) and the Second Annual Meeting of Physics in Medicine and Biology. A course of twenty lectures on "Radio-isotopes for Pharmaceutical Chemists", arranged at the request of the Victorian College of Pharmacy, was completed on 15th August, 1963.

During the year the National Health and Medical Research Council adopted a resolution from its

Occupational Health Committee that a three-day conference on radiation be held at the Laboratory and that it be attended by the most suitable qualified persons from the Commonwealth and State Health Departments. This conference was held at the Laboratory from 12th March to 14th March, 1963, and was attended by sixteen physicists and medical officers representing the Departments of Health of the Commonwealth and of all the States.

# COMMONWEALTH BUREAU OF DENTAL STANDARDS

DURING THE SECOND WORLD WAR the volume of testing and investigation of dental materials increased rapidly and the pressing need for Australian standards became obvious. In 1947 the transfer of the Materials Research Laboratory, attached to the Faculty of Dental Science, University of Melbourne, to the Department of Health and its re-organization as the Commonwealth Bureau of Dental Standards was approved.

The Bureau works in close co-operation with the Standards Association of Australia and the Australian Dental Association for the production of first-class dental materials and the position has been reached where few dentists will purchase dental materials not on the certified list or not approved by the Bureau if the Standard has not been completed. Importers also use the Bureau to screen overseas products and will only handle them on acceptance of a favorable report.

The activities of the Bureau of Dental Standards include the preparation of Australian dental standards and testing, research and advice related to dental and allied materials, instruments and equipment.

## STANDARDS

Testing, drafting and committee assistance has been given to the Standards Association of Australia Committees engaged in the preparation of dental specifications.

No additions to the 21 dental standards were made during the year, but AS A43, for Gypsum Plaster for Building Purposes, and AS T25 for Rubber Closures, were the result of the work of Standards Association of Australia Committees on which the Bureau was represented. The following standards were brought to the postal ballot stage prior to publication:—

Casting Investments (To be AS T.22),  
Hand Instruments (To be AS T.23),  
Hypodermic Needles (To be AS T.24),  
Gold Solder (To be AS T.26),  
Cobalt-Chromium Casting Alloy (To be AS T.28),  
Silver Solder (To be AS T.30).

Some of these and others for Elastomeric Impression Materials (to be AS T.27) and Cold-Processing Resins for Denture Repairs (to be AS T.31) were drafted for public critical review during the period and assistance was given with Insulin Syringes (to be AS T.29).

Other standards works included amendments to existing specifications and considerable work on amalgam alloys and orthodontic wires and, internationally, on Federation Dentaire Internationale (FDI) specifications.

## TESTING

Laboratory reports were issued on 414 products distributed as follows:—

Mineral products	..	..	27
Cements	..	..	21
Waxes and impression materials	..		29
Synthetic resins	..	..	54
Metals and alloys	..	..	202
Instruments	..	..	11
Surgical and therapeutic materials	..		70

Classified according to the firm or organization requesting the tests, the statistics become—

Public instrumentalities	..	..	17
Australian firms	..	..	241
Overseas firms	..	..	44
Internal reports	..	..	112
			—
Total	..	..	414
			—

## RESEARCH

Research and investigational projects undertaken during the year concerned the following subjects:—

The effect of crosslinked denture resins on the strength of repairs.

The effectiveness of fluorides in dentrifices.

The surface quality of gypsum cast into alginate impressions.

The properties of stainless steel orthodontic wires and their correlation with clinical requirements.

The preparation of gold specimens and their mechanical testing.

The thermal expansion of dental waxes.

The use of ultrasonic energy in the condensation of silver-tin amalgams.

The properties of new types of direct filling resins.



The properties of resilient denture liners.

The testing of tungsten carbide burs.

The proportioning of dental cements.

Defects in synthetic resin teeth.

Elastomeric impression materials.

The dimensions of the blades of dental chisels.

Assistance was given during the year in investigations being carried out on—

The soldering of orthodontic wires.

Electroformed matrices as bases for gold castings.

The movement of teeth in experimental media on the application of orthodontic forces.

Gold foil restorations.

#### ADVISORY SERVICES

Numerous inquiries from dentists, firms and organizations have been handled and considerable assistance given in undergraduate and graduate training.

Exhibits on the properties and use of materials have been displayed in Adelaide, Brisbane and Mel-

bourne and lectures were presented by members of the staff to various groups in Adelaide, Melbourne, Sydney and Cologne (Germany).

#### OVERSEAS VISIT

At the beginning of the year, the Officer-in-charge completed his overseas travel with visits to the research laboratories of dental manufacturers and dental schools in Western Germany. He attended the 13th International Dental Congress in Cologne taking part in lectures, panel discussions and meetings of the committee concerned in the standardization of dental materials. In addition to the scientific sessions attended, the Trade Exhibit held in conjunction with the Congress provided an opportunity of studying developments in materials and equipment, some 450 firms being represented.

Prior to the Congress the Officer-in-charge had visited dental materials research centres in the United States of America, the United Kingdom, Scandinavia, Holland and Germany, and had attended the International Association for Dental Research meeting held in St. Louis, Missouri. He had lectured in a number of the places visited.

# AUSTRALIAN INSTITUTE OF ANATOMY

THE AUSTRALIAN INSTITUTE OF ANATOMY, situated in a building erected in Canberra by the Commonwealth Government under the *Zoological Museum Agreement Act 1924*, consists of a museum section and a laboratory section. The Institute became part of the Commonwealth Department of Health in 1931.

In the museum section, which is open to the public, a portion of the original collection of anatomical specimens assembled by Sir Colin MacKenzie, the first Director of the Institute, is displayed together with ethnological collections which have been added since the Institute's foundation. The material has been arranged to present simple lessons in human hygiene, to display the anatomical features and peculiarities of Australian fauna and to show various aspects of the culture of Australian aboriginals and natives of Papua and New Guinea.

The scientific research work of the Institute is now concentrated mainly on problems of nutrition. It takes the form of field surveys of dietary status and laboratory investigations into the biochemistry of nutrition and metabolism.

## MUSEUM

The exhibit dealing with the Ancestry of Man has been completely revised so as to incorporate the very important discoveries in South Africa of early ancestors of Man by Professor Raymond Dart—who was born and given his medical training in Australia before settling in Africa. This exhibit has been designed to illustrate the cultural evolution of Man as well as his physical evolution.

Work has continued with the revision of the displays illustrating aboriginal culture.

## NUTRITION RESEARCH

In conjunction with the Australian Bread Research Institute a scheme has been evolved whereby "bread improver" containing potassium iodate would supply sufficient iodine to prevent goitre in areas where this disease occurs. It is anticipated that this scheme will eventually replace the present schemes for the prevention of goitre, which include medicated (iodised) tablets issued to school children (in Tasmania and Victoria), and special iodised salt used in bread-baking (in A.C.T.).

The most important nutrition work carried out has been the compilation of a Report on Studies on Dietary Intake and Expenditure of Energy of New

Guineans. These studies were made in New Guinea during 1962 on behalf of the South Pacific Commission and the Department of Health, Territory of Papua and New Guinea. A wide approach to this subject has been attempted. The people studied included New Guineans living in rural areas, one group in the Eastern Highlands, and a second on the Southern Coast. The dietary studies are being continued and will include an urban settlement in Port Moresby. In addition more data is being collected relating to water and salt metabolism of people living in the Eastern Highlands.

The Nutrition Section has taken an active part in organizing the following Symposia to take place at the ANZAAS Conference in Canberra from 20th to 24th January, 1964:—

- (1) An Integrated Approach to Nutrition and Society—The Case of Chimbu.
- (2) The Social and Economic Consequences of Adding Years to Life.
- (3) Growth and Physical Fitness of Australians.
- (4) Trace Elements and Dental Caries—Relationships.

The publication every two months of *Food and Nutrition Notes and Reviews* was continued in 1962-63.



# NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL

IN 1925 the Royal Commission on Health recommended that the Commonwealth provide funds and facilities to enable the formation of a Federal Health Council for the purpose of securing closer co-operation between the Commonwealth and State Health authorities. A subsequent conference of Ministers for Health strongly supported this recommendation and the Council was established on 20th November, 1926.

In 1937 the Federal Health Council was merged into a new organization known as the National Health and Medical Research Council and the Commonwealth Government introduced the Medical Research Endowment Act of 1937 establishing a fund out of moneys appropriated by Parliament and of bequests and the income therefrom.

Grants may be made from this fund by the Commonwealth Minister for Health acting on the advice of the National Health and Medical Research Council. The Council comprises representatives of the Governments of the Commonwealth, the States and the Territory of Papua and New Guinea and of the Commonwealth Serum Laboratories Commission, nominees of the Federal Council of the Australian Medical Association, the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the Council of the Australian College of General Practitioners, the College of Pathologists of Australia, the Australian Dental Association, the Australian Paediatric Association, the College of Radiologists of Australasia, the Australian Universities having Medical Schools and an eminent man and an eminent woman, not being medical or dental practitioners, appointed by the Commonwealth Government.

During the year ended 30th June, 1963, two sessions of the National Health and Medical Research Council were held. The 54th session was held at the School of Public Health and Tropical Medicine in Sydney on 25th October, 1962, and the 55th session was held in the New Taxation Building in Brisbane on 30th and 31st May, 1963.

## MEDICAL RESEARCH GRANTS

The amount of £308,500 was allocated in 1962-63 to the Medical Research Endowment Fund for expenditure on grants for medical research recommended by the council.

The main innovation during the year was the formation of Regional Grants Sub-committees which visited the applicants for research grants and inspected their laboratories. This greatly helped the work of the Medical Research Advisory Committee, enabling a better assessment to be made of the applicants and their projects.

The Medical Research Advisory Committee conducted a detailed inquiry into the major equipment requirements for medical research in the research institutes and university departments throughout the country. The results of this inquiry were discussed with the Australian Universities Commission and a detailed report was made to council. The Central Medical Research Register of Grants has been established, which records grants made by nine of the larger organizations supporting medical research in

Australia and enables information on all these grants to be made readily available to the organizations when they are meeting to consider applications.

## COMMITTEES OF COUNCIL

As part of the general re-organization of the council activities all the committees of council were reformed. Three main advisory committees were appointed which will report direct to council. These are the Medical Research Advisory Committee, composed of persons with specialized knowledge and experience in medical research appointed by the council, the Medicine Advisory Committee, composed of the members of council representing the Australian colleges and medical associations, and the Public Health Advisory Committee, composed of the State Directors of Health. The Antibiotics, Nursing, Nutrition, Radiation Health and Radio Isotopes Committees were reformed with new terms of reference and will report to council in future through the Medicine Advisory Committee. The Dental Health, Epidemiology, Food Additives, Food Standards, Maternal and Child Health, Medical Statistics, Occupational Health, Traffic Injury, Tropical Medicine and Health and Veterinary Public Health Committees were also reformed with new terms of reference and will report to council through the Public Health Advisory Committee.

Sub-committees were formed to deal with the Training of Personnel Using Radio Isotopes, Poisons Schedules, Poliomyelitis, Preventive Medicine in



General Practice, Health Advertisements, the Labelling of Hazardous Substances, Dental Data Standardization, Virology, Food Irradiation, Food and Cosmetic Colours, Pesticide Residues in Food, the National Morbidity Survey, Radiation Technical Matters and Policy and Pesticides.

### **Antibiotics**

The Antibiotics Committee was concerned about the abuse of antibiotics in Australia and warned of the inherent dangers of indiscriminate antibiotics therapy and the undesirability of the general public seeking these "wonder drugs" from their medical attendants beyond the actual needs of their particular maladies. In particular, the Antibiotics Committee stressed that many complicated viral infections are not influenced by antibiotics and they noted in these cases antibiotics may do more harm than good. It was recommended that the use of antibiotics for food preservation should not be approved at present.

### **Aspirin and Phenacetin**

Following reports of the possible harmful effects of phenacetin and the known harmful effects of large doses of aspirin, council requested the Royal Australian College of Physicians to give an opinion on the whole problem of analgesic consumption and toxicity. In an interim report the Therapeutics Advisory Committee of the college concluded that it is proven that analgesics containing phenacetin are liable to cause methaemoglobinaemia and haemolytic anaemia if taken in excess, and that aspirin in a daily dose of 2.5 to 4 grams causes gastro-intestinal bleeding in some 70 per cent. of people and if long continued could lead to significant anaemia. It was considered that any one who wishes to take these preparations daily should be warned to do so only after obtaining medical advice and sanction.

### **Dental Health**

The council has previously given its unequivocal support to the fluoridation of water supplies to prevent dental caries and the Dental Health Committee is now investigating the possible importance of other trace elements in the prevention of dental caries. This will involve as a preliminary, the standardization of methods for obtaining and recording dental health data so that investigations carried out by different groups in various parts of the country can be compared.

### **Food Additives and Food Standards**

Detailed food standards were completed for skim milk, malted milk powder, condensed milks, flavoured milks, marzipan, cocoa, chocolate, prescribed food colourings, lemon butter, fruit flavoured spreads, fruit flavoured fillings, ice cream and related

products. These standards will greatly assist the States in making their food regulations and, insofar as they will tend to produce uniform food regulations, will also be of great assistance to food producers and distributors.

### **Medical Statistics**

The Medical Statistics Committee has been considering the Eighth Revision of the International Statistical Classification of Diseases and Council approved a draft report on this matter recommending that modified cardiovascular and peri-natal classifications be tried in Australia.

The Council recommended the establishment of Cancer Registries in each State to aid in the follow-up of cases, the assessment of the value of therapeutic measures and preventive programmes, epidemiological research, sociological inquiries and medical education. The Medical Research Advisory Committee will pay particular attention this year to the incidence of skin cancer in Northern Queensland.

### **Occupational Health**

This Committee considered many different problems during the year, but in particular produced detailed advice on the safe handling of cyanides on the waterfront, and recommended maximum concentrations of atmospheric contaminants of occupational exposures and proposals for uniform legislation to control the use of certain anti-cholinesterase compounds commonly used as pesticides.

### **Poisons Schedules**

During the year considerable progress has been made towards achieving the uniform scheduling of drugs and pharmaceuticals in all the States. The Poisons Schedules Sub-Committee receives copies of all applications for the scheduling of new drugs and also advises the States on any discrepancies between their schedules.

### **Radio Therapy**

A Code of Practice for the control and safe handling of sealed sources used in radiation therapy was published during the year as a Special Report of the Council. A Sub-Committee was formed to investigate the training of personnel using radio isotopes and this Sub-Committee will undertake the preparation of a suitable syllabus and conditions for certification, and the investigation of ways and means to establish suitable training courses for these personnel in Australia.

Council will consider the practicability of prospective clinical trials of radiation treatment on a co-ordinated basis between different centres in Australia.



### **Tetanus Prophylaxis**

The safest method of protection against tetanus is by active immunization with tetanus toxoid, either alone or in combination with other immunizing agents. In recommending the value of this form of tetanus immunization, the Council stressed that booster injections should be given every five years and urged doctors to ensure that all patients are effectively immunized against tetanus. The possible risks of anaphylactic shock following the administration of anti-tetanic horse serum were considered and this matter is to be studied by the Medical Statistics Committee. The Council requested that a human tetanus immune serum should be produced for use in persons who are sensitive to horse serum.

### **Traffic Injuries**

Council urged that a mark should be registered for safety belts to clearly distinguish those meeting the relevant Australian safety standards. The scheme to provide a standardized medical report form for traffic accidents was supported. These forms are being printed and will be used initially by over 30 general practitioners interested in the traffic accident injury problem. The Council provides a research grant to support an accident injury investigation in

Brisbane and supported a proposed extension of this project. It was noted, however, that very little of the information available on the prevention of traffic accidents has been applied and that other countries' successes in preventing traffic accidents has been due to action at the political, social and educational levels.

### **Leprosy**

The Council accepted the detailed report by a special Leprosy Committee as a general principle for control of leprosy in Australia. It was considered that it should be possible to eliminate leprosy in Australia during this century and that it is now possible to define and clinically recognize non-infectious states of leprosy. Amongst the more general recommendations it was considered that the terms "leper", "lazaret" and "leprosarium" should no longer be used and that the curable nature of the condition should be stressed by referring to people with leprosy as "leprosy patients" or "patients with Hansen's Disease" and to special leprosy isolation establishments as "leprosy hospitals", "hospitals for the treatment of Hansen's Disease" or simply "isolation hospitals".

# WORLD HEALTH ORGANIZATION

THE WORLD HEALTH ORGANIZATION is a specialized agency of the United Nations. Its head-quarters are in Geneva, and it has six regional offices throughout the world. Australia is assigned to the Western Pacific Region at Manila.

The organs of the World Health Organization are the World Health Assembly, the Executive Board and the Secretariat. The World Health Assembly meets annually and the Executive Board meets twice a year. The Health Assembly has established six regional organizations, consisting of committees and regional offices.

Australia is a financial member of the World Health Organization and is represented annually at its Assembly and the Western Pacific Regional Committee.

## SIXTEENTH WORLD HEALTH ASSEMBLY

The Sixteenth World Health Assembly met in Geneva from 7th to 24th May, 1963.

The Australian delegation consisted of: Major-General W. D. Refshauge, leader; Mr. R. W. Furlonger, Head of the Australian Permanent Mission to the United Nations; Dr. R. C. Webb, Chief Medical Officer, Australia House, London. Alternate delegates were Dr. C. W. Phillips, Chief Medical Officer, The Hague, and Dr. C. W. Ramsay, Medical Officer, Athens.

The Assembly consisted of Plenary Meetings, Meetings of the Committee on Programme and Budget and Meetings of the Committee on Administration, Finance and Legal Matters.

Dr. M. A. Majekodunmi of Nigeria was elected President of the Assembly. The Australian delegation was appointed to serve on the Committee on Credentials.

During the Session two new Associate Members were admitted, Kenya and Mauritius, which brings the number of the World Health Organization Member States to 117.

The following are some of the main decisions taken by the Sixteenth Assembly:—

### Control of Dangerous Drugs

The thalidomide disaster induced the World Health Organization and its Member States to give close study to the problem of assessing new pharmaceutical products. The Assembly adopted a resolution requesting Member States to communicate to the World Health Organization any decision prohibiting or limiting the availability of a drug already in use; any decision to refuse the approval of a new drug and any approval for general use of a new drug when accompanied by restrictive provisions.

### Malaria Eradication

A detailed study of the world malaria eradication programme led the Assembly to adopt a resolution

inviting neighbouring countries to collaborate on a regional basis so that progress can be made in a broad geographical area and for mutual protection against re-introduction of the disease.

### Smallpox Eradication

The persistence of endemic areas of smallpox in Africa, Asia, and to a much lesser extent in South America, exposes the rest of the world to risk of infection. In a resolution, the Assembly recommends countries where the disease is still present to intensify control and eradication measures so as to reduce the danger of the spread of smallpox.

## REGIONAL COMMITTEE FOR WESTERN PACIFIC

The Thirteenth Session of the World Health Organization Regional Committee for the Western Pacific opened on 20th September, 1962, at Manila.

The Australian representatives were Dr. H. E. Downes of the Commonwealth Department of Health, Canberra, and Mr. D. Sadler of the staff of the Australian Embassy, Manila. Dr. C. J. Ross-Smith, General Secretary of the Australian Medical Association, and Dr. Michael J. Flynn, C.M.O. of the Metropolitan Water, Sewerage and Drainage Board, Sydney, also attended. Dr. Flynn, who was present at the request of the World Health Organization, acted as an alternate Australian representative.

Dr. Flynn was designated chairman of the technical discussions on "The Role of the Health Services in the Improvement of Community Water Supplies". These discussions were successful under his able chairmanship and a useful series of recommendations resulted.

The subject for technical discussions for the fourteenth session will be "The Role of the Local Health Services in Leprosy Control".

It was confirmed at this meeting that the Fourteenth Session will be held in Port Moresby, Papua, in September, 1963, at the invitation of the Australian Government.



# COMMONWEALTH GRANTS

THE COMMONWEALTH GOVERNMENT, through the Department of Health, makes available grants to State Governments and non-profit-making organizations to subsidize various schemes for the promotion and maintenance of health services for the community.

## AUSTRALIAN RED CROSS SOCIETY—BLOOD TRANSFUSION SERVICE

One of the most important of the services rendered by the Australian Red Cross Society is its Blood Transfusion Service which operates in all States and Territories of the Commonwealth.

Since 1954 the Commonwealth has made an annual grant to each State Government, equal to 30 per cent. of the certifiable operating costs of the Blood Transfusion Service incurred by the Society in each State, on the condition that 60 per cent. of the operating costs is met by the State concerned, leaving 10 per cent. of the expense to be met by the Society.

Details of grants made by the Commonwealth during the period under review are included in the following table:—

State				1962-63 (Based on Expenditure for year ended 30th June, 1962)
New South Wales	..	..	..	47,996
Victoria	..	..	..	55,846
Queensland	..	..	..	36,952
South Australia	..	..	..	21,008
Western Australia	..	..	..	17,427
Tasmania	..	..	..	5,386
Total	..	..	..	184,615

## ROYAL FLYING DOCTOR SERVICE

The Royal Flying Doctor Service of Australia is conducted by a Federal Council comprised of representatives of six sections, namely: Queensland, Victoria, New South Wales, South Australia, Western Australia and the Eastern Goldfields (W.A.).

The work of all of the Councillors and the bodies which support and assist the administration is purely voluntary.

The work of the Flying Doctor Service is aimed at providing medical services to the white and aboriginal populations in isolated areas and, in addition, as incidental to its main activities, wireless communications are maintained and utilized for social, private and business uses. From time to time special purposes work is undertaken in connexion with flood relief, searching for lost parties and co-ordinating cattle movements. The service is not conducted with a view to profit.

Charges are made in some sections of the service on a fixed basis while other sections do not make any fixed scale of charges but seek contributions from those who use their services, according to ability to pay. In some sections there is an arrangement to levy a fixed annual charge per person on graziers in certain areas.

The Commonwealth has been making grants available towards the cost of conducting the Flying Doctor Service since 1936. The Commonwealth grant in 1962-63 was £95,000. This provided for £55,000 towards the cost of operational expenses and £40,000 towards the cost of capital expenses. The Commonwealth also continued to meet the cost of the contents of standard medicine chests supplied for use in the various centres serviced by the Royal Flying Doctor Service when doctors give medical advice by radio.

## HOME NURSING SUBSIDY SCHEME

The Home Nursing Subsidy Scheme which came into operation on 1st January, 1957, was designed to assist in the extension of home nursing activities, either by the expansion of existing home nursing organizations or the formation of new ones. To be eligible for a subsidy, an organization must provide a home nursing service, be a non-profit-making organization, employ registered nurses and be in receipt of assistance from a State Government.

Subsidy payments are based on the number of nurses employed over and above the number employed during September, 1956, in the case of existing organizations, and on the total number of registered nurses employed by newly formed organizations. A subsidy at the rate of £1,000 per annum is paid in respect of each additional nurse employed in the first instance and at the rate of £500 per annum in respect of nurses employed by newly formed organizations.

The annual subsidy paid by the Commonwealth since the inception of the Home Nursing Subsidy Scheme has been—

				£
1956-57	..	..	..	1,807
1957-58	..	..	..	18,135
1958-59	..	..	..	34,538
1959-60	..	..	..	53,616
1960-61	..	..	..	78,014
1961-62	..	..	..	107,668
1962-63	..	..	..	144,387

## FREE MILK FOR SCHOOL CHILDREN

The *States Grants (Milk for School Children) Act* 1950 makes provision for the Commonwealth to subsidize the States for the cost of providing free milk to school children. The State governments administer this scheme and the Commonwealth reimburses the cost of the milk supplied and half the cost of any incidental expenditure.

The subsidy for 1962-63 was £3,727,154, which permitted the free distribution of one-third of a pint of milk daily to approximately 1,352,000 school children attending public and private primary schools, kindergartens, crèches, and aboriginal missions throughout Australia.

Expenditure by the Commonwealth on the Free Milk Scheme since its commencement in 1950-51 is shown in Table 38 on page 87. However, these figures do not include amounts reimbursed to the States in respect of 50 per cent. of capital and incidental expenditure, which was £12,599 for 1962-63.

## MENTAL INSTITUTIONS

Earlier Commonwealth action in the field of mental health is summarized in the Report covering the period ended 30th June, 1956. As there recorded, the Commonwealth Government, in June, 1955, made an offer to the States of a grant of £10,000,000 for the purpose of encouraging a capital expenditure programme of £30,000,000. The offer was made on

the basis of the provision of £1 by the Commonwealth for every £2 by the States. All the States accepted the offer made by the Commonwealth and agreed to the grant being divided on a population basis. This resulted in the States being eligible for the following amounts:—

	£
New South Wales ..	3,830,000
Victoria ..	2,740,000
Queensland ..	1,460,000
South Australia ..	895,000
Western Australia ..	720,000
Tasmania ..	355,000
	<hr/>
	10,000,000
	<hr/>

In November, 1955, the Commonwealth Parliament passed the *States Grants (Mental Institutions) Act* which provided the necessary legislation for the above grants to be made available to the States. Expenditure must have the prior approval of the Minister for Health. The grant is paid to the States as a part reimbursement of their expenditure and therefore the amount of Commonwealth contribution, within the above totals, is dependent upon the capital expenditure made by the States in connexion with their mental hospitals.

Details of the expenditure by the States each year and the amount of Commonwealth grants paid to the States since the inception of the scheme are shown in Table 39 on page 87.



# **APPENDIXES**

## **STATISTICS AND PUBLICATIONS**





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# APPENDIX I — STATISTICS

TABLE 1  
NATIONAL HEALTH  
DEPARTMENTAL EXPENDITURE

Year ended 30th June—				Expenditure under National Health Act					Other Departmental Expenditure	Total Departmental Expenditure (a)
				Hospital Benefits	Medical Benefits	Pharma- ceutical Benefits	Pensioner Medical Service	Total		
				£	£	£	£	£	£	£
1952	..	..	..	6,683,106	..	7,685,046	1,036,225	15,404,377	6,335,813	21,740,190
1953	..	..	..	7,223,241	..	7,215,309	1,739,953	16,178,503	8,701,572	24,880,075
1954	..	..	..	8,330,053	1,434,166	9,229,413	2,115,539	21,109,171	10,070,574	31,179,745
1955	..	..	..	9,320,603	4,209,495	10,739,467	2,516,077	26,785,642	10,935,258	37,720,900
1956	..	..	..	9,552,944	5,413,320	11,887,434	2,874,364	29,728,062	12,783,890	42,511,952
1957	..	..	..	9,813,283	6,146,029	11,716,825	2,998,886	30,675,023	15,694,579	46,369,602
1958	..	..	..	10,823,096	7,085,524	15,033,989	3,198,791	36,141,400	15,578,506	51,719,906
1959	..	..	..	14,802,290	7,779,451	20,972,797	3,806,457	47,360,995	15,500,339	62,861,334
1960	..	..	..	18,599,245	9,291,706	24,335,671	4,112,637	56,339,259	15,086,226	71,425,485
1961	..	..	..	20,668,010	9,976,154	27,881,222	4,200,273	62,725,659	15,298,678	78,024,337
1962	..	..	..	22,202,153	10,911,483	35,189,883	4,397,938	72,701,457	16,208,716	88,910,173
1963	..	..	..	23,663,049	11,737,161	38,455,079	4,572,898	78,428,187	17,766,466	96,194,653

(a) In addition to the amounts shown, Allowances are paid to Tuberculosis sufferers by the Department of Social Services—for details see Table 19.

TABLE 2  
HOSPITAL BENEFITS  
NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE

State				Number of Registered Organizations		Membership as advised by Organizations		Estimated Coverage (including Dependants)		Percentage of Population covered	
				As at 30th June, 1962	As at 30th June, 1963	As at 30th June, 1962	As at 30th June, 1963	As at 30th June, 1962	As at 30th June, 1963	As at 30th June, 1962	As at 30th June, 1963
										Per cent.	Per cent.
New South Wales	..	..	..	30	30	1,225,338	1,232,467	2,946,000	2,963,000	73	72
Victoria	..	..	..	46	44	901,596	923,469	2,415,000	2,485,000	81	82
Queensland	..	..	..	3	3	292,579	296,353	724,000	735,000	47	47
South Australia	..	..	..	13	13	336,445	349,831	786,000	822,000	80	80
Western Australia	..	..	..	11	10	269,123	265,765	623,000	628,000	83	82
Tasmania	..	..	..	10	10	104,645	108,284	244,000	262,000	68	72
Commonwealth	..	..	..	113	110	3,129,726	3,176,169	7,738,000	7,895,000	73	73

**TABLE 3**  
**HOSPITAL BENEFITS**  
**BENEFITS PAID TO CONTRIBUTORS BY REGISTERED ORGANIZATIONS**

State	Number of Days for which Fund Benefit was paid		Average Amount of Fund Benefit per Day		Percentage of Members to whom Fund Benefit was paid		Average Stay in Hospital (Days)		Fund Benefit			
									Excluding Ancillary		Ancillary	
	Year ended 30th June, 1962	Year ended 30th June, 1963	Year ended 30th June, 1962	Year ended 30th June, 1963	Year ended 30th June, 1962	Year ended 30th June, 1963	Year ended 30th June, 1962	Year ended 30th June, 1963	Year ended 30th June, 1962	Year ended 30th June, 1963	Year ended 30th June, 1962	Year ended 30th June, 1963
			£ s. d.	£ s. d.	Per cent.	Per cent.			£	£	£	£
New South Wales ..	4,331,336	4,399,139	1 14 2	1 16 2	31.9	33.3	11.06	10.64	7,391,703	7,962,119	16,291	17,620
Victoria ..	2,442,035	2,501,937	1 9 0	1 11 8	24.7	24.9	11.31	10.98	3,542,933	3,966,075	111,806	157,263
Queensland ..	1,214,823	1,176,195	1 6 6	1 8 10	34.9	37.8	11.79	10.85	1,611,677	1,697,735	815	52,466
South Australia ..	1,049,659	1,082,123	1 14 0	1 17 9	33.5	36.6	9.19	8.68	1,782,608	2,044,233	127,168	152,895
Western Australia ..	1,002,128	942,992	1 9 6	1 13 0	39.3	39.2	9.76	9.00	1,477,617	1,557,786	55,736	70,382
Tasmania ..	301,227	316,385	1 18 11	2 1 11	29.5	31.0	9.59	9.49	585,892	663,551	1,492	21,481
Commonwealth	10,341,208	10,418,771	1 11 8	1 14 4	30.9	32.1	10.78	10.29	16,392,430	17,891,499	313,308	472,107

**TABLE 4**  
**MEDICAL BENEFITS**  
**NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE**

State	Number of Registered Organizations		Membership as advised by Organizations		Estimated Coverage (including Dependents)		Percentage of Population covered	
	As at 30th June, 1962	As at 30th June, 1963	As at 30th June, 1962	As at 30th June, 1963	As at 30th June, 1962	As at 30th June, 1963	As at 30th June, 1962	As at 30th June, 1963
							Per cent.	Per cent.
New South Wales ..	26	25	1,157,535	1,184,282	2,804,000	3,004,000	69	73
Victoria ..	23	21	797,068	830,278	2,253,000	2,326,000	76	76
Queensland ..	6	6	280,001	292,065	719,000	755,000	46	49
South Australia ..	8	8	291,489	308,892	707,000	769,000	72	75
Western Australia ..	9	8	225,328	237,029	564,000	591,000	75	77
Tasmania ..	10	10	94,836	99,873	228,000	241,000	64	66
Commonwealth ..	82	78	2,846,257	2,952,419	7,275,000	7,686,000	68	71

**TABLE 5**  
**MEDICAL BENEFITS**  
**MEDICAL SERVICES RECEIVED BY CONTRIBUTORS TO REGISTERED ORGANIZATIONS**

State	Services received				Average Number of Services per Contributor (Fee for Service Organizations)	
	Number of Services		Percentage of General Practitioner Services to Total Services			
	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63
			Per cent.	Per cent.		
New South Wales .. ..	8,821,000	9,523,313	71	71	7.62	7.94
Victoria .. ..	5,644,558	6,059,989	74	73	7.35	7.49
Queensland .. ..	2,493,878	2,618,677	73	73	8.82	9.35
South Australia .. ..	2,268,490	2,591,400	72	71	8.12	8.72
Western Australia .. ..	1,825,965	1,975,334	72	70	8.15	8.47
Tasmania .. ..	615,241	661,925	67	67	6.14	6.61
Commonwealth .. ..	21,669,132	23,430,638	72	72	7.71	8.03



**TABLE 6**  
**MEDICAL BENEFITS**  
**COST OF MEDICAL SERVICES TO CONTRIBUTORS TO REGISTERED ORGANIZATIONS**

State	Total Cost of Services, Fee-for-Service and Contract		Percentage of Total Cost (Fee-for-Service only) met by—						Fund Benefit paid			
			Fund		Commonwealth		Contributor		Excl. Ancillary		Ancillary	
	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63
	£	£	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	£	£	£	£
New South Wales ..	16,874,521	18,450,816	38.1	38.4	25.8	25.4	36.2	36.1	6,450,531	7,096,745	477,988	523,102
Victoria ..	10,237,729	11,428,921	31.5	31.4	26.8	25.9	41.7	42.7	3,234,623	3,558,612	99,485	59,274
Queensland ..	4,124,802	4,368,619	41.2	41.9	28.1	27.8	30.7	30.3	1,698,303	1,815,973	148,389	102,312
South Australia ..	3,917,143	4,408,476	38.2	38.4	29.4	29.8	32.4	31.8	1,496,374	1,696,760	67,203	50,321
Western Australia ..	3,016,258	3,242,382	39.5	39.6	30.5	30.5	30.0	29.9	1,207,242	1,298,280	35,557	20,741
Tasmania ..	1,079,074	1,207,470	40.6	40.8	26.6	26.2	32.8	33.0	444,001	498,754	43,154	26,137
Commonwealth	39,249,527	43,106,684	36.9	37.1	27.0	26.6	36.1	36.3	14,531,074	15,965,124	871,776	781,887

**TABLE 7**  
**PENSIONER MEDICAL SERVICE**  
**PENSIONERS AND DEPENDANTS ENROLLED**

State	As at 30th June, 1962			As at 30th June, 1963		
	Number of Pensions and Allowances current	Pensioners enrolled (including Pensioner Wives)	Total Number of Pensioners and Dependants enrolled	Number of Pensions and Allowances current	Pensioners enrolled (including Pensioner Wives)	Total Number of Pensioners and Dependants enrolled
New South Wales .. ..	317,207	287,065	324,836	326,478	288,194	326,114
Victoria .. ..	202,846	174,804	197,215	210,001	184,012	207,603
Queensland .. ..	125,153	111,797	133,254	129,793	114,676	137,035
South Australia .. ..	74,230	64,305	72,147	76,323	66,446	74,549
Western Australia .. ..	58,328	48,862	55,465	60,529	50,643	57,487
Tasmania .. ..	24,389	22,917	26,937	24,862	23,542	27,672
Northern Territory .. ..	1,612	413	463	1,802	437	490
Commonwealth .. ..	803,765	710,163	810,317	829,788	727,950	830,950

Australian Capital Territory figures are included in those shown for New South Wales.

**TABLE 8**  
**PENSIONER MEDICAL SERVICE**  
**PAYMENTS TO PARTICIPATING DOCTORS**

State	1961-62				1962-63			
	Number of Participating Doctors	Payments to Doctors			Number of Participating Doctors	Payments to Doctors		
		Medical Services	Mileage	Total		Medical Services	Mileage	Total
		£	£	£		£	£	£
New South Wales ..	2,322	1,904,092	19,806	1,923,898	2,325	1,917,966	16,787	1,934,753
Victoria ..	1,788	1,077,594	15,994	1,093,588	1,758	1,136,455	15,600	1,152,055
Queensland ..	775	583,448	5,582	589,030	802	624,527	6,199	630,726
South Australia ..	535	385,172	3,838	389,010	545	417,107	4,138	421,245
Western Australia ..	428	285,250	756	286,006	426	314,907	960	315,867
Tasmania ..	160	109,272	6,074	115,346	162	111,553	5,664	117,217
Northern Territory ..	4	984	76	1,060	7	1,017	18	1,035
Commonwealth ..	6,012	4,345,812	52,126	4,397,938	6,025	4,523,532	49,366	4,572,898

Australian Capital Territory figures are included in those shown for New South Wales.

**TABLE 9**  
**PENSIONER MEDICAL SERVICE**  
**NUMBER OF SERVICES AND MILEAGE VOUCHERS**

State	1961-62				1962-63			
	Number of Services			Number of Mileage Vouchers	Number of Services			Number of Mileage Vouchers
	Surgery	Domiciliary	Total		Surgery	Domiciliary	Total	
New South Wales ..	1,841,711	1,409,733	3,251,444	17,108	1,846,081	1,297,325	3,143,406	17,721
Victoria ..	921,946	880,204	1,802,150	13,747	967,381	872,662	1,840,043	13,707
Queensland ..	647,792	350,497	998,289	6,049	679,077	352,460	1,031,537	6,200
South Australia ..	306,420	330,997	637,417	3,570	334,678	336,445	671,123	3,917
Western Australia ..	303,841	181,701	485,542	928	330,742	187,006	517,748	1,029
Tasmania ..	116,337	69,681	186,018	4,707	118,257	65,256	183,513	4,245
Northern Territory ..	1,224	479	1,703	72	1,498	249	1,747	28
Commonwealth ..	4,139,271	3,223,292	7,362,563	46,181	4,277,714	3,111,403	7,389,117	46,847

Australian Capital Territory figures are included in those shown for New South Wales.



TABLE 10

**PHARMACEUTICAL BENEFITS**  
**COST OF BENEFIT PRESCRIPTIONS**  
**FOR POPULATION EXCLUDING PENSIONERS**

State	Payments by Commonwealth		Patient Contribution		Total Cost	
	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63
	£	£	£	£	£	£
New South Wales .. ..	8,960,997	9,625,701	2,640,195	3,044,979	11,601,192	12,670,680
Victoria .. ..	6,471,168	6,579,573	1,753,726	1,929,317	8,224,894	8,508,890
Queensland .. ..	2,941,758	3,121,383	915,753	1,045,486	3,857,511	4,166,869
South Australia .. ..	1,933,211	2,113,107	590,173	693,050	2,523,384	2,806,157
Western Australia .. ..	1,468,514	1,506,443	436,499	466,173	1,905,013	1,972,616
Tasmania .. ..	540,596	600,306	167,542	192,219	708,138	792,525
Commonwealth .. ..	22,316,244	23,546,513	6,503,888	7,371,224	28,820,132	30,917,737

**FOR PENSIONER POPULATION**

State						Payments by Commonwealth	
						1961-62	1962-63
						£	£
New South Wales .. ..	..	..	..	..	..	3,999,900	4,275,841
Victoria .. ..	..	..	..	..	..	2,081,855	2,297,137
Queensland .. ..	..	..	..	..	..	1,350,967	1,528,271
South Australia .. ..	..	..	..	..	..	829,259	902,604
Western Australia .. ..	..	..	..	..	..	609,797	658,734
Tasmania .. ..	..	..	..	..	..	225,720	252,788
Commonwealth .. ..	..	..	..	..	..	9,097,498	9,915,375

**FOR TOTAL POPULATION**

State	Patient Contribution		Cost to Commonwealth		Total Cost	
	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63
	£	£	£	£	£	£
New South Wales .. ..	2,640,195	3,044,979	12,960,897	13,901,542	15,601,092	16,946,521
Victoria .. ..	1,753,726	1,929,317	8,553,023	8,876,710	10,306,749	10,806,027
Queensland .. ..	915,753	1,045,486	4,292,725	4,649,654	5,208,478	5,695,140
South Australia .. ..	590,173	693,050	2,762,470	3,015,711	3,352,643	3,708,761
Western Australia .. ..	436,499	466,173	2,078,311	2,165,177	2,514,819	2,631,350
Tasmania .. ..	167,542	192,219	766,316	853,094	933,858	1,045,313
Commonwealth .. ..	6,503,888	7,371,224	31,413,742	33,461,888	37,917,630	40,833,112

NOTE.— (i) For division of the total cost of prescriptions into ingredient cost and chemists' oncost see Table 11.  
(ii) For Public Hospital and miscellaneous expenditure for 1962-63 see Table 13.

TABLE 11

## PHARMACEUTICAL BENEFITS

## DISSECTION OF BENEFIT PRESCRIPTION COSTS INTO INGREDIENT COST AND CHEMISTS' ONCOST

State	Cost of Ingredients and Containers		Oncost		Total Cost	
	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63
	£	£	£	£	£	£
New South Wales .. ..	9,524,195	10,116,327	6,076,897	6,830,194	15,601,092	16,946,521
Victoria .. ..	6,610,830	6,742,207	3,695,919	4,063,820	10,306,749	10,806,027
Queensland .. ..	3,078,066	3,275,471	2,130,412	2,419,669	5,208,478	5,695,140
South Australia .. ..	2,037,367	2,200,596	1,315,276	1,508,165	3,352,643	3,708,761
Western Australia .. ..	1,541,320	1,593,849	973,490	1,037,501	2,514,810	2,631,350
Tasmania .. ..	565,467	627,998	368,391	417,315	933,858	1,045,313
Commonwealth .. ..	23,357,245	24,556,448	14,560,385	16,276,664	37,917,630	40,833,112

Cost of ingredients and containers includes payments to chemists for wastages on broken quantities of Ready Prepared items.

Oncost includes mark up on wholesale price, and professional fees, but does not include discount allowed to chemists by wholesalers and manufacturers.

TABLE 12

## PHARMACEUTICAL BENEFITS

## NUMBER OF BENEFIT PRESCRIPTIONS AND AVERAGE COST

State	Number of Benefit Prescriptions						Average Cost per Benefit Prescription					
	Total		For Population Excluding Pensioners		For Pensioners		For All Prescriptions		For Population Excluding Pensioners		For Pensioners	
	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63	1961-62	1962-63
New South Wales ..	15,736,247	17,700,934	10,574,917	12,194,880	5,161,330	5,506,054	s. d. 19 10	s. d. 19 2	s. d. 21 11	s. d. 20 9	s. d. 15 6	s. d. 15 6
Victoria ..	9,578,615	10,540,865	7,024,291	7,725,403	2,554,324	2,815,462	21 6	20 6	23 5	22 0	16 4	16 4
Queensland ..	5,514,348	6,267,518	3,667,916	4,186,430	1,846,432	2,081,088	18 11	18 2	21 0	19 11	14 8	14 8
South Australia ..	3,408,362	3,910,376	2,363,851	2,773,772	1,044,511	1,136,604	19 8	19 0	21 4	20 3	15 11	15 11
Western Australia ..	2,523,068	2,690,676	1,748,332	1,867,384	774,736	823,292	19 11	19 7	21 10	21 1	15 9	16 0
Tasmania ..	953,766	1,081,671	671,063	769,941	282,703	311,730	19 7	19 4	21 1	20 7	16 0	16 3
Commonwealth	37,714,406	42,192,040	26,050,370	29,517,810	11,664,036	12,674,230	20 1	19 4	22 2	20 11	15 7	15 8

TABLE 13

## PHARMACEUTICAL BENEFITS

## PAYMENTS TO HOSPITALS AND MISCELLANEOUS SERVICES—1962-63

Hospitals						Miscellaneous Services*	Total
New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania		
£	£	£	£	£	£	£	£
1,444,777	1,680,000	928,186	298,301	411,224	123,625	107,078	4,993,191

\* Miscellaneous Services Expenditure consisted of—

	£
Biological Products and Prophylactic Materials .. ..	64,500
Commonwealth Medical Officers and Immigration Medical Service .. ..	4,678
Miscellaneous (Including Bush Nursing and Testing Expenses) .. ..	37,900
	107,078



TABLE 14

## PHARMACEUTICAL BENEFITS

NUMBER OF PHARMACEUTICAL CHEMISTS AND MEDICAL PRACTITIONERS DISPENSING  
PHARMACEUTICAL BENEFITS PRESCRIPTIONS

A. *Pharmaceutical Chemists* approved under Section 90 of the *National Health Act* 1953-1962 for the purpose of supplying pharmaceutical benefits.

B. *Medical Practitioners* approved under Section 92 of the *National Health Act* 1953-1962 for the purpose of supplying pharmaceutical benefits in areas in which there are no other pharmaceutical services available.

As at 30th June			New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania		Total Commonwealth	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
1950	..	..	1,200	2	1,038	6	285	3	265	27	202	12	90	..	3,080	50
1951	..	..	1,252	25	1,054	6	332	4	292	30	208	12	93	7	3,231	84
1952	..	..	1,323	26	1,070	7	348	5	305	29	212	12	95	8	3,353	87
1953	..	..	1,368	29	1,102	8	388	5	329	24	221	10	94	10	3,502	86
1954	..	..	1,452	31	1,170	8	437	6	368	25	232	11	95	11	3,754	92
1955	..	..	1,519	32	1,206	5	476	7	384	20	243	12	95	12	3,923	88
1956	..	..	1,574	31	1,245	6	520	8	396	20	261	11	97	11	4,093	87
1957	..	..	1,615	27	1,284	7	554	8	403	19	270	12	101	11	4,227	84
1958	..	..	1,681	28	1,299	7	571	8	424	18	282	12	111	11	4,368	84
1959	..	..	1,763	30	1,348	6	603	9	433	16	292	11	113	12	4,552	84
1960	..	..	1,818	29	1,383	6	645	9	436	17	296	10	118	12	4,696	83
1961	..	..	1,877	34	1,402	6	676	7	449	14	311	7	123	12	4,838	80
1962	..	..	1,933	36	1,414	6	696	6	459	13	312	6	127	11	4,941	78
1963	..	..	2,008	32	1,445	6	721	7	470	14	325	7	131	10	5,100	76

TABLE 15

## PHARMACEUTICAL BENEFITS

## DRUGS DISPENSED BY CHEMISTS—1962-63

(Benefits dispensed in hospitals are excluded)

Therapeutic Category						Percentage of Total Expenditure		Percentage of Total Prescriptions	
						1961-62	1962-63	1961-62	1962-63
						Per cent.	Per cent.	Per cent.	Per cent.
Broad Spectrum Antibiotics	..	..	..	..	..	22.4	20.3	9.0	8.5
Penicillins	..	..	..	..	..	9.6	9.7	7.1	7.3
Analgesics	..	..	..	..	..	7.7	8.2	11.1	11.4
Diuretics	..	..	..	..	..	7.9	7.5	4.4	4.6
Hypnotics	..	..	..	..	..	4.9	6.1	8.8	10.8
Blood Vessels	..	..	..	..	..	5.9	5.7	5.3	5.0
Anti-Histamines	..	..	..	..	..	2.7	3.6	3.1	3.7
Sulphonamides	..	..	..	..	..	3.3	3.1	4.5	4.4
Antacids	..	..	..	..	..	3.1	3.3	5.8	5.9
Expectorants and Cough Suppressants	..	..	..	..	..	2.3	3.0	3.9	4.8
Other Drugs	..	..	..	..	..	30.2	29.5	37.0	33.6

NOTE.—Some of the 1961-62 figures vary from those published in the previous report. This is due to the fact that drug groupings were revised at the commencement of the 1962-63 year and the 1961-62 figures have been adjusted to enable a direct comparison to be made between the figures for the two years.

TABLE 16  
TUBERCULOSIS  
NUMBER OF RECIPIENTS OF ALLOWANCES AT 31ST DECEMBER

Year					Number	Year					Number
1951	..	..	..	..	6,548	1957	..	..	..	..	3,326
1952	..	..	..	..	6,127	1958	..	..	..	..	2,750
1953	..	..	..	..	5,696	1959	..	..	..	..	2,503
1954	..	..	..	..	5,742	1960	..	..	..	..	2,235
1955	..	..	..	..	5,029	1961	..	..	..	..	2,017
1956	..	..	..	..	4,182	1962	..	..	..	..	1,845

TABLE 17  
TUBERCULOSIS  
NOTIFICATIONS BY STATES—YEAR ENDED 31ST DECEMBER, 1962

State					Population as at 31.12.62	Pulmonary	All Forms	Rate per 100,000	
								Pulmonary	All Forms
New South Wales	..	..	..	..	4,016,635	1,347	1,460	33.5	36.3
Victoria	..	..	..	..	3,013,447	723	809	23.9	26.8
Queensland	..	..	..	..	1,550,370	785	833	50.6	53.7
South Australia	..	..	..	..	999,693	211	243	21.1	24.3
Western Australia	..	..	..	..	765,715	228	253	29.7	33.0
Tasmania	..	..	..	..	369,403	117	132	31.7	35.7
Australian Capital Territory	..	..	..	..	68,824	39	41	56.6	59.5
Northern Territory	..	..	..	..	*45,000	53	54	117.7	120.0
Commonwealth	..	..	..	..	10,829,087	3,503	3,825	32.3	35.3

\* Now includes 17,000 aboriginals.

TABLE 18  
TUBERCULOSIS  
NOTIFICATIONS—COMMONWEALTH—YEARS ENDED 31ST DECEMBER

Year			Population '000's	Notifications				Deaths		Mortality Rate per 100,000	
				Pulmonary	All Forms	Incidence Rate per 100,000		Pulmonary	All Forms	Pulmonary	All Forms
						Pulmonary	All Forms				
1952	..	..	8,739	4,761	4,786	54.5	54.8	1,165	1,290	13.3	14.8
1953	..	..	8,903	4,787	4,979	53.8	55.9	879	974	9.9	10.9
1954	..	..	9,090	4,650	4,952	51.2	54.5	823	897	9.1	9.9
1955	..	..	9,313	4,360	4,602	46.8	49.4	672	729	7.2	7.8
1956	..	..	9,533	4,169	4,419	43.7	46.4	663	724	7.0	7.6
1957	..	..	9,747	3,762	4,035	38.6	41.4	543	585	5.6	6.0
1958	..	..	9,952	3,632	3,708	36.5	37.2	501	538	5.0	5.4
1959	..	..	10,166	3,160	3,582	31.1	35.2	509	549	5.0	5.4
1960	..	..	10,398	3,556	4,084	34.2	39.2	447	489	4.3	4.7
1961	..	..	10,495	3,239	3,570	30.9	34.0	412	447	3.9	4.3
1962	..	..	10,829	3,503	3,825	32.3	35.3	448	475	4.1	4.4



TABLE 19  
TUBERCULOSIS  
EXPENDITURE REIMBURSED TO STATES UNDER *TUBERCULOSIS ACT* 1948

Period						Capital Reimbursements	Maintenance Reimbursements	Allowances paid to sufferers	Total
						£	£	£	£
1949-50	..	..	..	..	..	236,179	346,142	..	582,321
1950-51	..	..	..	..	..	404,600	943,554	1,344,891	2,693,045
1951-52	..	..	..	..	..	645,131	2,114,291	1,777,620	4,537,042
1952-53	..	..	..	..	..	1,163,439	2,982,321	1,907,945	6,053,705
1953-54	..	..	..	..	..	1,295,476	3,738,885	1,876,582	6,910,943
1954-55	..	..	..	..	..	1,710,812	3,800,578	1,904,467	7,415,857
1955-56	..	..	..	..	..	1,747,722	4,050,581	1,689,774	7,488,077
1956-57	..	..	..	..	..	2,378,647	4,805,003	1,460,650	8,644,300
1957-58	..	..	..	..	..	2,128,462	4,569,215	1,254,693	7,952,370
1958-59	..	..	..	..	..	1,411,062	4,844,106	1,062,609	7,317,777
1959-60	..	..	..	..	..	729,236	4,376,256	1,025,473	6,130,965
1960-61	..	..	..	..	..	388,018	4,236,687	946,446	5,571,151
1961-62	..	..	..	..	..	378,095	4,400,034	872,853	5,650,982
1962-63	..	..	..	..	..	491,993	4,965,910	803,516	6,261,419
Total	..	..	..	..	..	15,108,872	50,173,563	17,927,519	83,209,954

TABLE 20  
TUBERCULOSIS  
RESULTS OF MASS X-RAY SURVEYS—YEAR ENDED 31st DECEMBER, 1962

State			Number Examined	Number Active T.B.	Rate per 1,000	Number Inactive T.B.	Rate per 1,000	Suspect Active T.B. at 31.12.62	Rate per 1,000
New South Wales	..	..	777,817	420	0.53	4,517	5.81	456	0.58
Victoria*	..	..	456,559	211	0.46	1,384	3.03	..	..
South Australia	..	..	161,199	43	0.26	3,382	20.98	89	0.55
Queensland	..	..	148,049	164	1.10	914	6.17	60	0.41
Western Australia	..	..	101,938	60	0.58	..	..	14	0.13
Tasmania	..	..	106,703	119	1.11	11	0.10	..	..
Total	..	..	1,752,265	1,017	0.58	10,208	5.83	619	0.35

\* Voluntary mass surveys only.

**TABLE 21**  
**PUBLIC HEALTH**  
**NOTIFIABLE DISEASES IN THE STATES OF AUSTRALIA—YEAR ENDED 31st DECEMBER, 1962**

Disease	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Acute Rheumatism .. .. .	21	79	112	10	9	12	4	—	247
Amoebiasis .. .. .	*	5	8	1	3	—	2	—	19
Ancylostomiasis .. .. .	8	—	66	—	15	—	210	—	299
Anthrax .. .. .	*	—	—	—	—	—	—	—	—
Bilharziasis .. .. .	*	—	—	—	—	—	—	—	—
Breast Abscess .. .. .	1	35	43	*	*	*	2	—	81
Brucellosis .. .. .	13	43	12	—	6	—	—	—	74
Chorea (St. Vitus Dance) .. .. .	1	4	—	—	—	*	3	—	8
Dengue .. .. .	10	—	4	—	—	*	—	—	14
Diarrhoea, Infantile .. .. .	133	512	97	—	51	11	183	15	1,002
Diphtheria .. .. .	9	29	5	4	17	1	—	—	65
Dysentery, Bacillary .. .. .	*	43	29	46	177	6	69	—	370
Erythema Nodosum .. .. .	*	14	—	1	—	*	—	—	15
Encephalitis .. .. .	28	20	16	4	—	—	—	—	68
Filariasis .. .. .	*	—	1	—	—	1	—	—	2
Homologous S. Jaundice .. .. .	*	—	*	—	—	*	—	—	—
Hydatid .. .. .	*	19	—	1	1	30	—	—	51
Infectious Hepatitis .. .. .	3,358	3,533	885	504	117	630	100	88	9,215
Influenza .. .. .	*	*	*	—	*	*	*	*	—
Lead Poisoning .. .. .	—	—	18	1	1	*	—	—	20
Leprosy .. .. .	—	—	3	—	16	—	43	—	62
Leptospirosis .. .. .	20	3	138	—	6	*	—	—	167
Leukaemia .. .. .	*	49	*	*	*	*	—	—	49
Malaria .. .. .	*	17	56	1	4	1	3	1	83
Meningococcal Infection .. .. .	39	55	75	10	2	15	2	3	201
Ophthalmia .. .. .	*	*	*	1	29	—	—	17	47
Ornithosis .. .. .	3	—	9	—	—	*	—	—	12
Paratyphoid .. .. .	2	1	5	—	1	1	—	—	10
Poliomyelitis .. .. .	246	24	140	15	6	1	1	2	435
Puerperal Fever .. .. .	52	2	18	—	—	2	13	—	87
Q Fever .. .. .	*	*	97	*	*	*	*	*	97
Rubella .. .. .	*	1,556	18	543	94	14	8	17	2,250
Salmonella Infection .. .. .	*	*	*	69	49	*	4	3	125
Scarlet Fever .. .. .	318	576	96	183	28	39	1	4	1,245
Staphylococcal Infection (infancy) .. .. .	511	32	3	*	*	*	*	*	546
Tetanus .. .. .	*	7	13	—	1	1	—	—	22
Trachoma .. .. .	*	—	*	—	367	*	28	—	395
Trichinosis .. .. .	*	*	*	—	—	*	—	—	—
Tuberculosis .. .. .	1,444	884	839	254	301	119	65	45	3,951
Typhoid Fever .. .. .	8	14	3	1	5	—	7	—	38
Typhus—(flea, mite or tick borne) .. .. .	1	—	14	—	—	—	—	—	15

\* Not Notifiable. — No Cases.

NOTE.—No case of Cholera, Plague, Smallpox, Epidemic Typhus or Yellow Fever was notified.

**TABLE 22**  
**PUBLIC HEALTH**  
**POLIOMYELITIS—NUMBER OF CONFIRMED CASES BY AGE GROUP**

Age Group							Number	
							1961-62	1962-63
0- 1 .. .. .	..	..	..	..	..	..	24	1
1- 4 .. .. .	..	..	..	..	..	..	186	10
5- 9 .. .. .	..	..	..	..	..	..	114	4
10-14 .. .. .	..	..	..	..	..	..	39	4
15-19 .. .. .	..	..	..	..	..	..	23	..
20-24 .. .. .	..	..	..	..	..	..	44	4
25-29 .. .. .	..	..	..	..	..	..	63	4
30-34 .. .. .	..	..	..	..	..	..	34	5
35-39 .. .. .	..	..	..	..	..	..	17	1
40-49 .. .. .	..	..	..	..	..	..	11	..
50-59 .. .. .	..	..	..	..	..	..	4	..
60 and over .. .. .	..	..	..	..	..	..	1	1
Not Stated .. .. .	..	..	..	..	..	..	12	1
Total .. .. .	..	..	..	..	..	..	572	35



**TABLE 23**  
**PUBLIC HEALTH**  
**POLIOMYELITIS—NUMBER OF CONFIRMED CASES BY SEX AND MONTH OF OCCURRENCE**

	1961-62			1962-63		
	Male	Female	Total	Male	Female	Total
July .. .. .	15	16	31	2	4	6
August .. .. .	19	7	26	2	4	6
September .. .. .	18	11	29	1	1	2
October .. .. .	24	14	38	1	2	3
November .. .. .	52	49	101	3	1	4
December .. .. .	64	46	110	1	..	1
January .. .. .	49	45	94	4	..	4
February .. .. .	48	28	76	2	1	3
March .. .. .	28	21	49	..	3	3
April .. .. .	3	6	9	2	..	2
May .. .. .	4	1	5	..	1	1
June .. .. .	4	..	4	..	..	..
Total .. .. .	328	244	572	18	17	35

**TABLE 24**  
**PUBLIC HEALTH**  
**POLIOMYELITIS—NUMBER OF CONFIRMED CASES BY STATES**

State	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63
New South Wales .. .. .	263	82	21	18	17	8	367	5
Victoria .. .. .	236	62	3	78	10	80	21	11
Queensland .. .. .	106	36	3	3	4	19	157	..
South Australia .. .. .	160	61	5	1	7	22	19	17
Western Australia .. .. .	419	12	2	1	6	..	6	2
Tasmania .. .. .	21	37	3	1	2	46	..	..
Australian Capital Territory .. .. .	11	..	..	..	..	..	..	..
Northern Territory .. .. .	4	..	..	..	14	3	2	..
Total .. .. .	1,220	290	37	102	60	178	572	35

**TABLE 25**  
**PUBLIC HEALTH**  
**INFECTIOUS HEPATITIS—CASES NOTIFIED BY STATES—YEAR ENDED 31st DECEMBER**

State	1958	1959	1960	1961	1962*
New South Wales .. .. .	3,262	3,183	4,924	6,025	3,358
Victoria .. .. .	1,053	1,452	2,385	3,515	3,533
Queensland .. .. .	469	762	719	1,022	885
South Australia .. .. .	307	749	1,121	1,406	504
Western Australia .. .. .	396	142	256	262	117
Australian Capital Territory .. .. .	16	16	88	281	88
Northern Territory .. .. .	45	53	23	61	100
Tasmania .. .. .	51	21	44	304	630
Total Australia .. .. .	5,599	6,378	9,560	12,876	9,215

\* Figures in this column are subject to confirmation.

TABLE 26  
QUARANTINE  
VESSELS BOARDED AND CLEARED—1962-63

Port	Vessels Boarded and Cleared					
	Surface			Air		
	Vessels	Crew	Passengers	Vessels	Crew	Passengers
Sydney .. .. .	504	43,124	36,349	980	10,545	56,161
Newcastle .. .. .	103	4,469	54	..	..	..
Port Kembla .. .. .	113	5,660	25	..	..	..
Botany Bay .. .. .	134	7,021	12	..	..	..
Eden .. .. .	1	36	..	..	..	..
Total New South Wales .. .. .	855	60,310	36,440	980	10,545	56,161
Melbourne .. .. .	256	18,018	12,248	2	19	6
Geelong .. .. .	191	7,711	29	..	..	..
Portland .. .. .	9	406	1	..	..	..
Avalon Airport .. .. .	..	..	..	9	100	173
Total Victoria .. .. .	456	26,135	12,278	11	119	179
Brisbane .. .. .	340	18,897	2,913	60	623	4,308
Bundaberg .. .. .	2	57	..	..	..	..
Cairns .. .. .	52	2,179	42	1	9	5
Gladstone .. .. .	29	1,261	16	..	..	..
Mackay .. .. .	28	1,081	..	..	..	..
Mourilyan Harbour .. .. .	35	1,460	5	..	..	..
Rockhampton .. .. .	3	176	9	..	..	..
Townsville .. .. .	45	1,875	76	38	261	129
Thursday Island .. .. .	14	426	..	1	1	..
Urangan .. .. .	2	127	..	..	..	..
Amberley .. .. .	..	..	..	11	73	175
Total Queensland .. .. .	550	27,539	3,061	111	967	4,617
Port Adelaide .. .. .	136	10,492	8,714	..	..	..
Port Augusta .. .. .	5	195	..	..	..	..
Port Pirie .. .. .	20	1,177	11	..	..	..
Cape Thevenard .. .. .	6	241	3	..	..	..
Whyalla .. .. .	3	116	..	..	..	..
Wallaroo .. .. .	17	704	4	..	..	..
Port Lincoln .. .. .	9	324	2	..	..	..
Total South Australia .. .. .	196	13,189	8,734	..	..	..
Fremantle .. .. .	491	57,393	124,137	..	..	..
Kwinana .. .. .	169	8,744	..	..	..	..
Albany .. .. .	30	1,558	769	..	..	..
Broome .. .. .	1	80	42	..	..	..
Bunbury .. .. .	19	886	12	..	..	..
Carnarvon .. .. .	10	446	93	..	..	..
Derby .. .. .	11	907	633	..	..	..
Esperance .. .. .	1	51	..	..	..	..
Geraldton .. .. .	35	1,442	29	..	..	..
Point Samson .. .. .	10	533	50	..	..	..
Port Hedland .. .. .	7	267	..	..	..	..
Wyndham .. .. .	2	80	12	..	..	..
Yampi Sound .. .. .	1	37	..	..	..	..
Perth .. .. .	..	..	..	242	2,692	15,846
Total Western Australia .. .. .	787	72,424	125,777	242	2,692	15,846



TABLE 26—continued  
 QUARANTINE—continued  
 VESSELS BOARDED AND CLEARED, 1962-63—continued

Port	Vessels Boarded and Cleared					
	Surface			Air		
	Vessels	Crew	Passengers	Vessels	Crew	Passengers
Hobart .. .. .	38	2,980	517	..	..	..
Launceston .. .. .	13	594	14	..	..	..
Burnie .. .. .	3	129	24	..	..	..
Devonport .. .. .	3	115	14	..	..	..
Total Tasmania .. .. .	57	3,818	569	..	..	..
Darwin .. .. .	42	2,379	2,671	1,079	8,342	39,448
Total All States .. .. .	2,943	205,794	189,530	2,423	22,665	116,251

TABLE 27  
 QUARANTINE  
 INFECTIOUS DISEASES ON OVERSEAS VESSELS ARRIVING IN AUSTRALIA 1962-63

Disease	No. of Cases
Chickenpox .. .. .	80
Gastro-Enteritis .. .. .	1
Gonorrhoea .. .. .	20
Infective Hepatitis .. .. .	3
Infective Diarrhoea .. .. .	2
Influenza .. .. .	20
Measles .. .. .	324
Mumps .. .. .	12
Pulmonary Tuberculosis .. .. .	4
Rubella .. .. .	5
Syphilis .. .. .	2
	473

TABLE 28  
QUARANTINE  
INSPECTIONS AND EXAMINATIONS AT AUSTRALIAN PORTS—1962-63

Port	Number of Vessels Inspected			Number of Seamen Examined
	Primary Inspection	Annual Re-inspection	Special Inspection	
Sydney .. .. .	..	38	2	336
Newcastle .. .. .	1	26	4	205
Melbourne .. .. .	..	..	22*	192
Brisbane .. .. .	1	..	..	82
Cairns .. .. .	..	..	..	5
Townsville .. .. .	..	1	..	6
Port Adelaide .. .. .	6	4	..	..
Port Pirie .. .. .	..	..	..	..
Port Augusta .. .. .	..	..	..	..
Whyalla .. .. .	2	..	..	..
Fremantle .. .. .	..	6	..	202
Hobart .. .. .	..	..	..	12
Launceston .. .. .	..	2	..	..
Devonport .. .. .	..	1	..	..
Darwin .. .. .	..	..	..	4
Geelong .. .. .	..	..	3*	4
Point Wilson .. .. .	..	..	1*	..

\* Only Medical and Hospital cabinets inspected.

TABLE 29  
TERRITORY HEALTH  
HEALTH SERVICES PROVIDED AT MAIN NORTHERN TERRITORY HOSPITALS—1962-63

	Darwin	Alice Springs	Tennant Creek	Katherine	Batchelor
Total Number of Daily Occupied Beds .. .. .	88,342	33,765	5,357	7,106	..
Total Number of Admissions .. .. .	5,779	2,776	699	660	..
Average Number of Daily Patients .. .. .	243.6	92.5	14.6	19.4	..
Total Number of Births .. .. .	782	258	44	66	..
Total Number of Deaths in Hospital .. .. .	131	103	14	20	..
Total Number of P.M. Examinations .. .. .	89	52	14	4	..
Total Number of Major Operations .. .. .	623	135	Nil	Nil	..
Total Number of Minor Operations .. .. .	2,137	501	46	89	..
Total Number of Outpatients Treated .. .. .	* 76,176	26,520	8,466	5,100	† 1,154 ‡ 5,352
Dispensaries—					
Prescriptions Dispensed .. .. .	22,819	9,125	2,898	12,931	..
Daily Average of Prescriptions Dispensed per Working Day .. .. .	93	36	9	41	..
X-Ray Department—					
Number of Examinations .. .. .	6,580	2,487	459	234	..
Number of Exposures .. .. .	9,966	3,744	1,009	319	..
Ambulance Services—					
Number of Trips .. .. .	1,977	516	70	125	..
Number of Patients Carried .. .. .	2,376	606	82	140	..
Number of Miles Travelled .. .. .	26,242	17,716	9,647	17,425	..
Physiotherapy Department—					
Number of Patients .. .. .	631	246	..	..	..
Number of Treatments .. .. .	3,594	1,086	..	..	..

\* Including Bagot.

† Outpatients seen at Doctor's Clinic.

‡ Outpatients seen at Daily Clinic.



TABLE 30  
TERRITORY HEALTH  
DENTAL SERVICES PROVIDED IN THE NORTHERN TERRITORY—1962-63

								Darwin Dental Clinic	Aerial Mobile (operating from Darwin)	Overland Mobile (operating from Darwin)	Alice Springs Clinic (including Mobile Schools)
Examinations .. .. .	..	..	..	..	..	..	..	6,633	4,569	3,438	1,931
Extractions .. .. .	..	..	..	..	..	..	..	4,545	1,634	1,249	2,086
Porcelain fillings .. .. .	..	..	..	..	..	..	..	1,028	} 581	{ 204	330
Amalgam fillings .. .. .	..	..	..	..	..	..	..	6,021			1,757
Inlays .. .. .	..	..	..	..	..	..	..	223	..	44	62
Crowns .. .. .	..	..	..	..	..	..	..	18	..	19	14
Bridges .. .. .	..	..	..	..	..	..	..	8	..	1	1
Dressings .. .. .	..	..	..	..	..	..	..	441	..	59	98
X-rays .. .. .	..	..	..	..	..	..	..	826	..	37	375
G.A.'s hospital .. .. .	..	..	..	..	..	..	..	43	..	2	49
Scale and clean .. .. .	..	..	..	..	..	..	..	326	..	96	175
Pyorrhea .. .. .	..	..	..	..	..	..	..	..	..	1	..
Injective gingivitis .. .. .	..	..	..	..	..	..	..	2	..	4	13
Orthodontic .. .. .	..	..	..	..	..	..	..	150	..	2	111
Oral surgery .. .. .	..	..	..	..	..	..	..	67	..	34	66
Jaw fractures .. .. .	..	..	..	..	..	..	..	13	..	..	7
Other treatment .. .. .	..	..	..	..	..	..	..	2,714	113	279	1,228
Denture, full .. .. .	..	..	..	..	..	..	..	327	21	102	188
Denture, part .. .. .	..	..	..	..	..	..	..	245	..	53	90
Denture, repair .. .. .	..	..	..	..	..	..	..	538	..	77	270
Denture, remodel .. .. .	..	..	..	..	..	..	..	53	..	25	38
Alveolar osteitis .. .. .	..	..	..	..	..	..	..	7	..	5	5
Root treatment .. .. .	..	..	..	..	..	..	..	32	..	..	15
Total .. .. .	..	..	..	..	..	..	..	24,623	6,919	6,838	8,900
Total for previous year .. .. .	..	..	..	..	..	..	..	22,681	10,212	2,247	10,324

TABLE 31  
NATIONAL FITNESS  
ALLOCATION OF ANNUAL GRANT TO STATE NATIONAL FITNESS COUNCILS—1962-63

Item	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Totals
	£	£	£	£	£	£	£
Wages, salaries, allowances, overtime and services not otherwise provided for .. .. .	3,050	3,050	2,615	2,615	2,615	2,615	16,560
Services to associated groups including leader training .. .. .	3,490	3,490	2,615	2,615	2,615	2,615	17,440
Grants to voluntary youth organizations .. .. .	870	870	768	768	768	448	4,492
Subsidies to local national fitness committees .. .. .	1,310	1,310	1,142	1,142	1,142	675	6,721
Services to sports organizations .. .. .	423	423	260	260	260	175	1,801
Development of camps and hostels .. .. .	3,490	3,490	2,615	2,615	2,615	2,615	17,440
Totals .. .. .	12,633	12,633	10,015	10,015	10,015	9,143	64,454

**TABLE 32**  
**NATIONAL FITNESS**  
**ALLOCATION OF ANNUAL GRANT TO STATE EDUCATION DEPARTMENTS—1962-63**

Item	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Totals
	£	£	£	£	£	£	£
Training of general teachers in physical education—							
(a) Short courses .. .. .	500	500	500	300	300	300	2,400
(b) Residential courses .. .. .	500	500	500	500	500	500	3,000
Provision of bursaries to enable selected teachers to undertake university courses .. .. .	..	..	..	600	600	600	1,800
Development of health and physical education in practising schools and teachers colleges—							
(a) Equipment .. .. .	300	300	300	200	200	200	1,500
(b) Camps for teachers college students .. .. .	250	250	250	150	150	150	1,200
Publications, films, records, &c. .. .. .	484	484	483	483	483	483	2,900
Development of school camping and hostelling—							
(a) Equipment of camps and schools .. .. .	500	500	500	400	400	400	2,700
(b) School camping and hostelling .. .. .	300	300	300	200	200	200	1,500
Totals .. .. .	2,834	2,834	2,833	2,833	2,833	2,833	17,000

**TABLE 33**  
**COMMONWEALTH X-RAY AND RADIUM LABORATORY**  
**ISOTOPES PROCURED BY THE LABORATORY—1962-63**

Isotope	Number of Shipments received	Activity (mc)	Use*	Notes
As 74 .. .. .	11	295	M	
Au 198 .. .. .	38	7.6	M	
Ba 133 + Cs 137 .. .. .	1	..	MR	" Mock iodine 131 " (reference source)
C 14 .. .. .	156	89.4	MR	81 different compounds
	1	0.05	M	
	6	..	M	Reference sources
	5	..	MR	Reference sources
Ca 45 .. .. .	6	5.6	MR	
Ca 47 .. .. .	4	0.59	M	
	2	0.10	MR	
Co 58 .. .. .	24	1.29	M	
Cr 51 .. .. .	12	27.7	M	Chromic chloride
	2	4.2	MR	Chromic chloride
	21	284	M	Sodium chromate
	39	83.5	MR	Sodium chromate
	2	20	MR	Sodium chromate in Na OH
	1	1	M	Human serum albumin
Cs 137 .. .. .	1	..	M	Reference source
Fe 59 .. .. .	8	5.5	M	Ferric chloride
	3	0.9	MR	Ferric chloride
	6	0.88	MR	Ferric citrate
	9	2.35	MR	Ferrous citrate
H3 .. .. .	1	10,000	MR	Gas
	1	5	M	Water
	5	1,410	MR	Water
	2	..	MR	Reference sources
	3	1,625	M	
	81	18,842	MR	} 25 compounds other than above



TABLE 33—continued.

COMMONWEALTH X-RAY AND RADIUM LABORATORY—continued.  
ISOTOPES PROCURED BY THE LABORATORY, 1962-63—continued.

Isotope	Number of Shipments received	Activity (mc)	Use*	Notes
I 125 .. .. .	1	2	M	Iodine in Na OH
	1	2	MR	Iodine in Na OH
	3	15	MR	Iodine in Na OH + Na <sub>2</sub> CO <sub>3</sub>
I 131 .. .. .	61	14,835	M	Iodide in thiosulphate
	49	441	M	Iodide in isotonic saline
	8	34	MR	Iodide in isotonic saline
	5	15.5	M	Iodide in dil. Na OH
	22	258.9	MR	Iodide in dil. Na OH
	2	2	M	Cholografin
	91	91.5	M	Hippuran
	206	207.9	M	Human serum albumin
	34	1.9	M	Human serum albumin (pre-packaged)
	36	11.2	MR	Human serum albumin (pre-packaged)
	3	3	M	Human serum albumin (metabolic)
	1	1	MR	Human serum albumin (metabolic)
	17	17	M	Oleic acid
	9	18	M	Rose bengal
	4	2	M	Thyroxine
	5	3	MR	Thyroxine
	47	5	M	L-tri-iodothyronine
	1	0.5	MR	L-tri-iodothyronine
	33	59	M	Triolein
	2	2	MR	Triolein
Kr 85 .. .. .	1	1,000	MR	Gas
Na 22 .. .. .	1	0.1	M	
	4	1.6	MR	Na Cl in H <sub>2</sub> O
P 32 .. .. .	26	1,975	M	Orthophosphate in dil. HCl
	35	354	MR	Orthophosphate in dil. HCl
	17	60	MR	Orthophosphate in saline
	24	503	M	Colloidal zirconium phosphate
Pm 147 .. .. .	1	1	MR	
Ra 226 .. .. .	1	..	MR	Reference source
S 35 .. .. .	15	153	MR	Four compounds
Sr 90 .. .. .	1	1	M	Ophthalmic applicator
	11	437	M	Plates
	1	..	M	Reference source
Te 132 .. .. .	18	106	M	Sodium tellurite
	9	57.5	MR	Sodium tellurite
U (nat) .. .. .	1	..	M	Reference source
Y 90 .. .. .	2	20	M	Wax
Zn 65 .. .. .	1	0.1	MR	Zinc chloride
Total .. .. .	1,261	53,409		

ISOTOPES PROCURED BY THE LABORATORY FOR MEDICAL USE FROM THE AUSTRALIAN ATOMIC ENERGY COMMISSION AND DESPATCHED BY THE COMMISSION DIRECT TO THE ULTIMATE USER

Isotope	Number of Shipments received	Activity (mc)	Use*	Notes
Au 198 .. .. .	9	339.5	M	Gold grains
	1	120	M	Colloidal form
Cu 64 .. .. .	15	370.4	M	
	1	25	MR	
K 42 .. .. .	15	1.5	M	
	7	5.6	MR	
Na 24 .. .. .	4	0.4	M	
	13	1.6	MR	
Ta 182 .. .. .	3	155	M	Wire
Total .. .. .	68	1,019		

\* Categories of Use: M: Medical (diagnosis and/or treatment);  
MR: Medical Research.

TABLE 34  
COMMONWEALTH X-RAY AND RADIUM LABORATORY  
DISTRIBUTION OF ISOTOPES FOR MEDICAL USE—1962-63

Isotope			Chemical Form						Use		Number of Issues	Mc at Use
As 74	..	..	Arsenate	..	..	..	..	..	Diagnosis	..	15	254
Au 198	..	..	Colloidal gold	..	..	..	..	..	Therapy	..	0	0
									Diagnosis	..	38	6.7
C 14	..	..	Hydrocortisone-4-C14	..	..	..	..	..	Diagnosis	..	1	0.05
Ca 47	..	..	Chloride	..	..	..	..	..	Diagnosis	..	4	0.4
Co 57	..	..	Vitamin B12	..	..	..	..	..	Diagnosis	..	0	0
Co 58	..	..	Vitamin B12	..	..	..	..	..	Diagnosis	..	971	1.4
Cr 51	..	..	Chromate in isotonic saline	..	..	..	..	..	Diagnosis	..	1,681	182
			Chloride	..	..	..	..	..	Diagnosis	..	12	25
			Human serum albumin	..	..	..	..	..	Diagnosis	..	2	1.1
Total Cr 51		..	..	..	..	..	..	..	..	..	1,695	208
Fe 59	..	..	Ferric chloride	..	..	..	..	..	Diagnosis	..	316	3
H 3	..	..	Acetic anhydride	..	..	..	..	..	Diagnosis	..	3	1,600
			Palmitic acid	..	..	..	..	..	Diagnosis	..	1	25
			Water	..	..	..	..	..	Diagnosis	..	1	5
I 125	..	..	Iodine in weak Na OH	..	..	..	..	..	Diagnosis	..	1	1.9
I 131	..	..	Iodide in thiosulphate	..	..	..	..	..	Therapy—			
									General	..	872	9,295
									Carcinoma	..	30	2,898
									Diagnosis	..	9,099	235
			Iodide in isotonic saline	..	..	..	..	..	Therapy	..	0	0
									Diagnosis	..	49	367
			Iodine in weak Na OH	..	..	..	..	..	Diagnosis	..	5	15
			Cholografin	..	..	..	..	..	Diagnosis	..	2	1.70
			Diodrast	..	..	..	..	..	Diagnosis	..	0	0
			Gamma globulin	..	..	..	..	..	Diagnosis	..	0	0
			Hippuran	..	..	..	..	..	Diagnosis	..	88	54
			Human serum albumin	..	..	..	..	..	Diagnosis	..	257	132
			Human serum albumin (metabolic)	..	..	..	..	..	Diagnosis	..	3	1.0
			Human serum albumin (pre-packaged doses)	..	..	..	..	..	Diagnosis	..	384	1.9
			Hypaque	..	..	..	..	..	Diagnosis	..	0	0
			Oleic acid	..	..	..	..	..	Diagnosis	..	17	10.6
			Olive oil	..	..	..	..	..	Diagnosis	..	0	0
			Poly-vinyl pyrrolidone	..	..	..	..	..	Diagnosis	..	0	0
			Rose bengal	..	..	..	..	..	Diagnosis	..	10	16.7
			L-thyroxine	..	..	..	..	..	Diagnosis	..	5	1.6
			L-tri-iodothyronine	..	..	..	..	..	Diagnosis	..	47	4.1
			Triolein	..	..	..	..	..	Diagnosis	..	34	37
Total I 131		..	..	..	..	..	..	..	..	..	10,902	13,071
Na 22	..	..	Sodium chloride	..	..	..	..	..	Diagnosis	..	1	0.10
P 32	..	..	Orthophosphate in dilute hydrochloric acid	..	..	..	..	..	Therapy	..	284	1,457
									Diagnosis	..	42	37
			Colloidal zirconium phosphate	..	..	..	..	..	Therapy	..	34	346
Total P 32		..	..	..	..	..	..	..	..	..	360	1,840
Te 132	..	..	Sodium tellurite	..	..	..	..	..	..	..	16	70
Y 90	..	..	Sintered rods	..	..	..	..	..	Therapy	..	0	0
			Wax	..	..	..	..	..	Therapy	..	2	20
Totals		..	..	..	..	..	..	..	..	..	14,327	17,106

In this table the word "issue" denotes an isotope container despatched from the Laboratory. The isotope in the container may consist of either an individual dose or of a bulk issue from which individual doses will be dispensed. The number of patients treated will therefore be at least as great as the number of issues.



TABLE 35  
COMMONWEALTH X-RAY AND RADIUM LABORATORY  
RADIO-ISOTOPES ISSUED FROM BULK SUPPLIES—1962-63

Isotope	Chemical Form	Medical Research		A.A.E.C.*		Total	
		Number of Issues	mc at Issue	Number of Issues	mc at Issue	Number of Issues	mc at Issue
Cr 51 ..	Chromate in isotonic saline .. ..	3	5.6	0	0	3	5.6
Fe 59 ..	Chloride in isotonic saline .. ..	1	2 $\mu$ c	0	0	1	2 $\mu$ c
I 131 ..	Iodide in thiosulphate .. ..	30	64	5	14	35	78
P 32 ..	Orthophosphate in dilute hydrochloric acid ..	58	168	1	1.6	59	170
.. ..	Colloidal zirconium phosphate ..	13	29.2	0	0	13	29.2

The table presents data on the issues made for research in the physical and biological sciences and for investigations of production problems in industry.

\* Material delivered either direct to A.A.E.C. or to non-medical users against A.A.E.C. orders on the Laboratory.

TABLE 36  
COMMONWEALTH X-RAY AND RADIUM LABORATORY  
RADIO-ISOTOPE CLEARANCES GIVEN BY AUSTRALIAN ATOMIC ENERGY COMMISSION—1962-63

Isotope							Number of Clearances	Quantity (mc.)	Notes
A 41 .. .. .	..	..	..	..	..	..	1	15	Neutron sources
Ag 110 .. ..	..	..	..	..	..	..	2	1.1	
Am 241 .. ..	..	..	..	..	..	..	3	11.75	
Am 241-Be ..	..	..	..	..	..	..	3	21	
Au 198 .. ..	..	..	..	..	..	..	14	31,268	
Ba 131 .. ..	..	..	..	..	..	..	1	0.1	80 different compounds
Ba 133 .. ..	..	..	..	..	..	..	1	..	
Ba 140 .. ..	..	..	..	..	..	..	2	3	
Be 7 .. .. .	..	..	..	..	..	..	5	34	
Br 82 .. .. .	..	..	..	..	..	..	4	126.3	
C 14 .. .. .	..	..	..	..	..	..	122	653.6	
.. .. .	..	..	..	..	..	..	6	..	
Ca 45 .. .. .	..	..	..	..	..	..	4	4	
Ce 144 .. ..	..	..	..	..	..	..	1	1	
Cl 36 .. .. .	..	..	..	..	..	..	11	1.12	
Co 57 .. .. .	..	..	..	..	..	..	3	8	Gas Water 13 different compounds Targets
Co 58 .. .. .	..	..	..	..	..	..	1	2	
Co 60 .. .. .	..	..	..	..	..	..	37	521,208	
.. .. .	..	..	..	..	..	..	1	..	
Cr 51 .. .. .	..	..	..	..	..	..	7	196	
Cs 137 .. ..	..	..	..	..	..	..	17	747.4	
.. .. .	..	..	..	..	..	..	2	..	
Eu 155 .. ..	..	..	..	..	..	..	1	2	
Fe 55 .. .. .	..	..	..	..	..	..	4	2.2	
Fe 59 .. .. .	..	..	..	..	..	..	5	6.5	
H 3 .. .. .	..	..	..	..	..	..	8	81,300	3 different compounds
.. .. .	..	..	..	..	..	..	4	3,640	
.. .. .	..	..	..	..	..	..	24	460.8	
.. .. .	..	..	..	..	..	..	2	..	
Hg 203 .. ..	..	..	..	..	..	..	5	517	
I 125 .. .. .	..	..	..	..	..	..	1	..	3 different compounds
I 131 .. .. .	..	..	..	..	..	..	23	75.64	
.. .. .	..	..	..	..	..	..	1	..	
Ir 192 .. ..	..	..	..	..	..	..	49	590,243	
K 42 .. .. .	..	..	..	..	..	..	7	45	
Kr 85 .. .. .	..	..	..	..	..	..	17	51,760	
Mn 54 .. .. .	..	..	..	..	..	..	1	0.1	
.. .. .	..	..	..	..	..	..	2	..	
Mo 99 .. ..	..	..	..	..	..	..	1	25	

TABLE 36

## COMMONWEALTH X-RAY AND RADIUM LABORATORY—continued.

RADIO-ISOTOPE CLEARANCES GIVEN BY AUSTRALIAN ATOMIC ENERGY COMMISSION—1962-63—contd.

Isotope	Number of Clearances	Quantity (mc.)	Notes
Na 22 .. .. .	11	3.01	
	1	..	
Na 24 .. .. .	5	342	
Ni 63 .. .. .	1	1	
Os 191 .. .. .	1	..	
P 32 .. .. .	81	447.1	4 different compounds
Pb 210 .. .. .	3	..	
Pm 147 .. .. .	1	10,000	
Po 210 .. .. .	9	195.5	
Pu 239 .. .. .	3	..	
Pu 239-Be .. .. .	2	..	Neutron sources
Ra 226 .. .. .	5	9.98	
Ra 226-Be .. .. .	18	190	Neutron sources
S 35 .. .. .	25	258.8	7 different compounds
Sb 124 .. .. .	3	2,130	
	1	..	
Sb 124-Be .. .. .	1	..	Neutron source
Sc 46 .. .. .	1	1	
Se 75 .. .. .	1	3	
Sr 90 .. .. .	21	1,141	
	3	..	
Ta 182 .. .. .	1	1.5	
Th 228 .. .. .	3	11.1	
Tl 204 .. .. .	11	207.5	
	1	..	
Tm 170 .. .. .	4	1,056	
W 181 .. .. .	2	2	
Zn 65 .. .. .	5	17	
Radium salts .. .. .	4	..	
Thorium salts .. .. .	2	..	
Uranium salts .. .. .	5	..	
Service irradiations .. .. .	10	..	

NOTE.—Where no activity is stated the radio-isotope requested was a reference source, generally of very low activity.

TABLE 37

COMMONWEALTH GRANTS  
FREE MILK FOR SCHOOL CHILDREN  
1962-63

State	Number of Children*	Payments
	As at 30th June, 1963	1962-63
	'000.	£
New South Wales .. .. .	573	1,315,403
Victoria .. .. .	433	948,992
Queensland .. .. .	253	570,718
South Australia .. .. .	195	355,447
Western Australia .. .. .	128	291,879
Tasmania .. .. .	60	188,107
Australian Capital Territory .. .. .	12	26,594
Northern Territory .. .. .	9	30,014
Total .. .. .	1,663	3,727,154

\* These figures represent the approximate number of school children eligible to participate in the Free Milk Scheme.



**TABLE 38**  
**COMMONWEALTH GRANTS**  
COMMONWEALTH GRANTS UNDER *STATES GRANTS (MILK FOR SCHOOL CHILDREN) ACT 1950*

Year					Commonwealth Grant	Year					Commonwealth Grant
					£						£
1950-51	..	..	..	..	35,775	1957-58	..	..	..	..	2,755,602
1951-52	..	..	..	..	814,806	1958-59	..	..	..	..	3,068,636
1952-53	..	..	..	..	1,521,394	1959-60	..	..	..	..	3,359,369
1953-54	..	..	..	..	1,999,312	1960-61	..	..	..	..	3,560,124
1954-55	..	..	..	..	2,237,425	1961-62	..	..	..	..	3,741,638
1955-56	..	..	..	..	2,405,349	1962-63	..	..	..	..	3,727,154
1956-57	..	..	..	..	2,607,040						

**TABLE 39**  
**COMMONWEALTH GRANTS**  
STATES EXPENDITURE AND COMMONWEALTH GRANTS UNDER *STATES GRANTS*  
(*MENTAL INSTITUTIONS) ACT 1955*

—	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	Total
	£	£	£	£	£	£	£	£	£
New South Wales—									
State Expenditure ..	626,290	1,150,666	972,455	590,492	1,077,181	1,298,642	1,945,912	1,942,685	9,604,323
Commonwealth Grant	208,763	383,555	324,152	196,831	359,060	432,881	648,637	647,562	3,201,441
Victoria—									
State Expenditure ..	1,337,239	1,581,639	1,636,095	1,858,862	1,554,704	251,461	..	..	8,220,000
Commonwealth Grant	445,746	527,213	545,365	619,621	518,235	83,820	..	..	2,740,000
Queensland—									
State Expenditure ..	199,764	264,203	342,311	355,536	223,839	292,927	212,151	112,780	2,003,511
Commonwealth Grant	66,588	88,068	114,103	118,512	74,613	97,642	70,718	37,593	667,837
South Australia—									
State Expenditure ..	36,735	385,400	456,476	366,983	275,310	137,073	83,518	156,336	1,897,831
Commonwealth Grant	12,245	128,467	152,159	122,328	91,770	45,691	27,839	52,112	632,611
Western Australia—									
State Expenditure ..	29,953	155,565	87,709	51,631	110,397	45,827	231,067	173,683	885,832
Commonwealth Grant	9,985	51,855	29,236	17,210	36,799	15,276	77,022	57,894	295,277
Tasmania—									
State Expenditure ..	89,467	206,923	274,151	137,677	200,984	155,798	..	..	1,065,000
Commonwealth Grant	29,822	68,974	91,384	45,892	66,995	51,933	..	..	355,000
Total—									
State Expenditure ..	2,319,448	3,744,396	3,769,197	3,361,181	3,442,415	2,181,728	2,472,648	2,385,484	23,676,497
Commonwealth Grant	773,149	1,248,132	1,256,399	1,120,394	1,147,472	727,243	824,216	795,161	7,892,166





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